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Symbol Elaboration Test (S.E.T.):

The Reliability and Validity of
a New Projective Technique

By

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Symbol Elaboration Test (S.E.T.)

The Reliability and Validity of
a Non-Verbal Technique

JOSEPH A. KAPLAN

THE AMERICAN PSYCHOLOGICAL ASSOCIATION
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JOHANNA KROUT

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CHAPTER I

PROBLEM

A. BACKGROUND STUDIES

THE first experimental attack on the problem of symbolism is credited by Sigmund Freud (3-a) to Scherner. In his attempt to establish the causes underlying dream symbols, Scherner investigated the relationship between various stimuli and the dream-work. From his experiments he concluded that dream symbols are the product of physiological tensions.

Freud (3-b) felt that Scherner had not gone far enough into the problem. In working out the patterns of the dream process, Freud had observed that certain forms repeated themselves, with variations, in different subjects. These forms seemed to have the same symbolic significance; although how the patient felt about them was indicated by other aspects of the dream-work, and varied from individual to individual. Stekel (21), Gutheil (8), and others later confirmed Freud's findings.

Psychoanalysts as a group have contributed much of the interest in, and most of the discussion about, universal symbols in recent times. They differ in their viewpoints, however. Some analysts such as Jung (12), White (23), and Barran (2), impressed by parallels between primitive myths and the dream-work of their patients, have concluded that there must be an "archaic unconscious," common to all people, which consists of the inherited experiences of earliest man. Horney (10) took exception to this. She has held that cultural factors and variations in individual experience make it impossible to generalize on symbolic meanings to the extent of assuming the existence of universal symbols.

Others, like Ferenczi (5), and Symons (22), seem to have formed the clinical impression that universal symbols do exist. However, they have not found it necessary to resort to constructs like the "archaic unconscious" to explain the simi-

larity between private symbol-systems, such as are found in dreams, and primitive myths. Neither have they found it necessary to ignore such a similarity because of chronologically secondary, though clinically important, individual differences. They base their theory on the belief that the process of thought is similar in all people.

Some non-analysts will not accept the concept of universal symbolism, but not so much because they are opposed to the concept as such. What they oppose is the methods used to establish universal symbolism. Havelock Ellis has fought the subjective bias in psychoanalysis which, he said, was at the basis of the belief in universal symbolism. He thought that the analysts, unwittingly or by design, have communicated to patients their own conceptions of what certain symbols mean. The possibility that this might be true raises certain questions as to the reliability, not to say validity, of various types of clinical findings.

Anthropologists have been concerned with the problem of universality in human experience. The present tendency is to emphasize cultural differences. However, some workers have been even more impressed by apparently basic similarities. For example, Roheim (18) established that there are certain symbols which appear among all the Australian tribes he had studied. Hallowell (9) has found it possible to analyze an Indian's dream in terms of Freudian symbols.

Various concepts growing out of psychoanalysis have been checked experimentally by Sears (19) and others, but the concept of symbolism as such has never been studied by experimental methods. Interest in projective techniques recently has drawn attention to the problem anew. The Rorschach test in particular, in its "qualitative" or symbolic-content aspects, carries the implication that universal symbols can be assumed to exist. Lindner (14) wrote about diagnostic Rorschach signs in terms of this implication. However, Lindner's observations also were in the nature of clinical findings rather than experimental results.

Among psychologists, Franck (7), assuming the correctness of universal symbolism, constructed a test of esthetic preference based on "masculine"

and "feminine" figures. Similarly Buck (4) in constructing his House-Tree-Person (H-T-P) test, has posited a certain universalism of response as he generalized on the cognitive aspects of his symbols.

Alschuler and Hattwick (1) have made a comprehensive study of symbolism in the paintings of young children. The method of these authors was completely inductive. When they compared the free drawings of children, they found evidence for assuming definite uniformities in the images of their subjects. Similar conclusions were reached by Immergluck and Cohen (11) who instructed their subjects to react to emotionally charged words (e.g., mother, father, love, war) by chance designs produced on paper. They found striking similarities in rhythmic patterns produced in association with given word stimuli. This study is especially interesting because it was not the purpose of these investigators to establish the possibility of symbolism in any form.

In summarizing the theoretical material in the literature pertaining to cultural symbolism, we may conclude that psychoanalysts in general have accepted the existence of universal symbols. They have found the concept useful in dream analysis and the interpretation of symptoms in the course of therapy. Anthropologists have applied the same concept to the analysis of myths of different peoples. However, because psychoanalysts and anthropologists have used either clinical or deductive methods for the most part, psychologists as a rule have declined to accept their conclusions. Recent psychological studies, such as those of Franck, Buck, Alschuler and Hattwick, and Immergluck and Cohen, have either assumed or inferred symbolic values, but did not aim to establish them.

This, substantially, was the state of the literature when the present study was begun in the winter of 1946.

B. BASIC CONCEPTS

This study is concerned with reactions to certain visual stimuli. These stimuli

have two characteristics in common. First, they are line figures which might be called *nonsense patterns*, because they are not pictorial representations of any obvious object, person or human detail; second, they have been presumed to possess a universally symbolic value. Because neither these nor any other line-patterns have been accepted as universal symbols by psychologists, this study raises the general question of whether universal symbols may be said to exist at all.

Clarity of discussion demands a definition of terms. Before details are given as to how this study was designed, we must make clear what we mean here by universal symbols. There are three points to consider: 1. What is a symbol? 2. What implications does the concept of universality carry in this study? 3. How can supposed nonsense figures actually be universal symbols?

First, the term *symbol* has been given a variety of meanings by various people, depending upon the application involved. There are as many definitions for the word "symbol" as there are authors writing on the subject, but the layman's meaning of "something that stands for something else" is preserved in all of them. For our purposes, the definition given by C. W. Morris (16) is most acceptable in that it emphasizes the stimulus-value of a symbol. He defines the symbol as a "given (or experienced) substitute-stimulus leading to a reinstatement of the original stimulus in a form observable only from the self-inclusive point of view." This definition implies that all symbols affect behavior by first evoking previous experience. It also implies that the image of the original experience is always peculiar to the individual.

A symbol which is effective for more than one person is based upon experience that has been shared by all for whom the symbol is effective. However, since any experience is uniquely personal (in the psychobiological sense), the reaction to any symbol is also uniquely personal. The Morris (16) definition holds for all symbols, whether verbal or non-verbal. Just how it applies may most easily be seen in a verbal

sample. When an English-speaking person is given the stimulus word, "Mother," he responds both in terms of: (a) the concept "Mother" as shared by all individuals (e.g., the quality of bearing children) and (b) the image of his own mother as it remains in his memory from his own experiences with her (e.g., enforcement of cleanliness, emphasis on religion, etc.). In other words his response contains elements which are found in the responses of others and elements which no one else's responses could contain.

Second, to assume that a symbol possesses a general (as distinguished from a uniquely personal) value, is to lay claim to two points: One, that there are experiences which are general, so that responses to certain symbols include reinstatements of original stimuli which are general for all people; and two, that these experiences may be symbolized by a form which is capable of reinstating the original (personal) experience. That generalized cultural (or reactive) experiences do exist among all peoples has been established by numerous anthropologists. A recent study by Ford (6) has demonstrated universal behavior patterns in 25 preliterate groups. Some of the patterns for which he listed 100% universality are eating, talking, coitus, etc.

Perception of structural differences in human beings may be added as a fairly general experience among people. Thus Seligman (20) has made the point that similar biological characteristics of human individuals are responsible for the universal features of certain culture patterns. An unanswered question is whether the form of symbolization is generalized enough to include even various individuals in a given culture, let alone all people everywhere. This is an issue on which the present study may throw some light but on which it will not seek to offer final proof.

The final question that arises here is how seeming nonsense patterns could have a generalized symbolic value. The patterns involved are obviously abstract, i.e., remote from concrete human experience. When individuals respond to them nonetheless, it is surely not safe to assume that their response involves a conscious recognition of the patterns as symbols. It is possible, however, to assume that these abstract patterns are substitute (symbolic) stimuli which are recognized, though not on a level of clear understanding, as having a vague relationship to the original stimulus. Such perception, it must be emphasized, is not on a level of

conscious awareness. In other words, the stimuli here operate without becoming understandable in verbal terms. The term "unconscious" is sometimes used to describe responses to the stimuli in question; but because of semantic difficulties, this term is here avoided, and the historically more respectable term "subliminal" (15) is used instead.

In summary, a generic or general symbol is defined as a substitute stimulus capable of reinstating a basic human experience which is part of the shared experience of many people in a given culture at least. Such a symbol may be so far removed from phenomenal reality as we know it that it can operate only as a subliminal cue. The response to it will be general only in the sense that the symbol will be an effective stimulus for all people sharing certain basic experiences. However, each person's response to such a "generalized symbol," as indeed to less common stimuli, must be assumed to include elements that are both unique and personal.

C. EXPERIMENTAL DESIGN

Eleven hypothetical symbols representing as many basic human experiences were included in this study. These symbols were designated as *stimulus patterns*, and were presented to the subjects as undifferentiated stimulus material.

The reactions of subjects to the stimulus patterns were obtained by the following method: The subjects were handed pencils and eleven sheets on each of which appeared one of the stimulus patterns. The directions asked for drawings of anything they pleased to present on each sheet, using the lines already on the sheet, if they could (details in Chapter II, section on *Presentation of Stimuli*). Next, an inquiry was conducted to establish what they had done and how they had felt about each of their drawings. In this way, not only the subjects' draw-

ings, but their verbal associations with the stimulus material were obtained as well. In each case, the two kinds of reactions, the drawings and the verbal associations, were considered the *subject's response*.

In this study it was assumed that the subjects' responses covered areas of experience of which the stimulus-patterns were symbolic. In the light of this assumption it was expected that specific attitudes of the subjects growing out of these areas might be revealed in their responses. To establish or disprove this possibility, the interpretations of the subjects' responses were checked against material gathered on these same subjects by independent workers. The material used for validation was referred to as *validation data*.

In brief, then, the design of this study involved the assumption that, if a given stimulus possesses a generalized symbolic value, it should be possible to infer specific facts about a subject from his response to that stimulus. These facts would relate to the basic human experience symbolized, in terms of its meaning for the subject. Conversely, if it is possible to discover accurate and specific facts about a subject from his reactions to a stimulus with a hypothetically generalized symbolic value, the repetition of this procedure with many subjects should substantiate the hypothetical meaning of the stimulus.

D. SELECTION OF STIMULUS PATTERNS

Eleven basic experiences were selected as probably common to all human personalities in our culture, and possibly other cultures as well.¹ Visual forms were then adapted from various sources (See

¹ Copyright of patterns symbolizing these experiences, as presented in this section, is reserved.

Background Studies) as symbolic of each area of experience. Thus eleven visual forms came to be used as stimulus-patterns in this study. Responses to the stimulus-patterns were considered to have been determined by the subjects' attitudes toward the "reinstatement" of the "original stimulus" (the basic experience) evoked by its supposed substitute-stimulus (the hypothetically symbolic stimulus pattern).

All of the stimulus-patterns were presented in as slightly structuralized form as possible,² so as to provide maximum opportunity for modification by the subject. The following is a list of the symbols selected and the sources from which they were adapted. It is considered beyond the scope of this study to establish why these particular symbols relate to the areas symbolized. However, theoretical reasons are suggested.

1. *The semi-circle pattern.* (Fig. 1). It seems to be a safe assumption that any human society



FIG. 1. The semi-circle pattern.

provides its members with the experience of "femaleness." This implies only that every individual learns to differentiate between the two sexes. How a given individual interprets "femaleness" depends upon his personal experience with females. As stated in the discussion of

² The actual order of presentation was: (1) blank sheet, (2) semi-circle, (3) semi-circle and single line, (4) single straight line, (5) inverted "V," (6) diffuse mass, (7) crosslines, (8) counter-opposed semi-circle, (9) semi-circle within larger semi-circle, (10) jagged line, (11) incomplete "U," (12) lines and semi-circles.

"Basic Concepts," the image evoked by any generalization is necessarily peculiar and private to the subject. It is probably true that similarities between images of people from a given culture are greater than those between people from different cultures. The hypothesis to be tested by the first stimulus-pattern is that it is symbolic of "femaleness," or refers to aspects of "femaleness" which are fundamental to any such generalization.

The symbol for this basic experience originated with Freud (3-c, p. 378). It was his clinical observations that led him to assume that round-

lines tended to be associated with the concepts "mother" and "love."

In the light of such findings, the author has chosen the semi-circle, as a rounded form, to represent the most likely symbol for "femaleness." The drawing responses associated with this form were expected to reflect the subject's attitudes toward females, within the orbit of his or her personal experience.

2. *The counter-opposed semi-circle pattern.* (Fig. 2). One semi-circle has been assumed to mobilize attitudes toward the quality we designate as "femaleness." Going one step further,

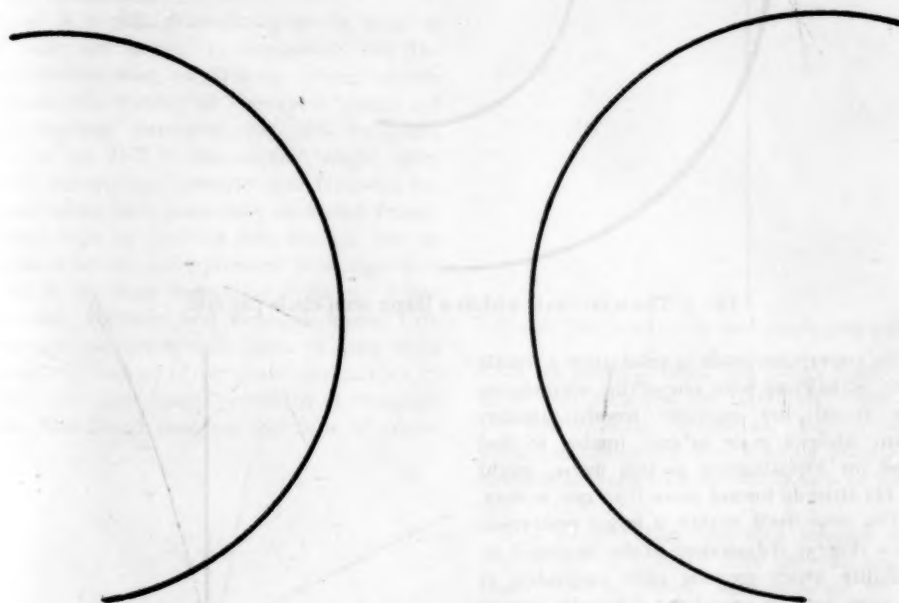


FIG. 2. The Counter-opposed semi-circle pattern

ness is symbolically associated with the concept of "femaleness." Alschuler and Hattwick (1), in their study of children's drawings have found that both rounded forms and square ones were characteristic of children when they were behaving along lines of more "feminine" patterns. Also when their children reported negative feelings about their mothers, they tended to smear or otherwise destroy rounded forms in their drawings.

Franck (7) based her work on the concept that "feminine" design was composed of round forms. Similarly, Immergluck and Cohen (11), in classifying drawing patterns obtained in response to verbal stimuli, found unexpectedly that round

we could assume that this same concept could be utilized to test attitudes toward females generalized as "female society." For this reason, it seemed desirable to devise a field containing more than one semi-circle.

The pattern in question derives from a basic rationale which is thus similar to that of the first pattern, except for the aspect of pluralism which it is meant to convey. To avoid the implication of two breasts, which might refer to one woman, the two semi-circles were given a 90° tilt. In thus counter-opposing two symbols of the same independent significance, the pattern was presumably insured against perception in its singular, instead of in its plural, form.

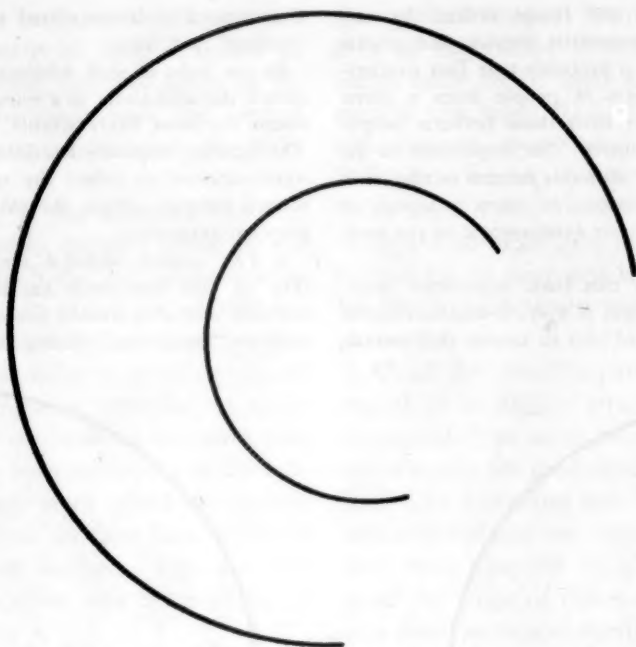


FIG. 3. The semi-circle within a larger semi-circle pattern.

If the assumption made is valid, then a female subject, identifying with one of the semi-circles, might reveal her attitude toward another woman; while a male subject, unable to find ground for identification in this figure, might show his attitude toward more than one woman.

3. *The semi-circle within a larger semi-circle pattern.* (Fig. 3). Adjustment to the increased responsibility which growing older engenders at every stage, may be considered a broadly human area of experience. The desire to regress, measured by the strength of dependence on the mother, and attitudes toward siblings, are all related to this area.

Roheim (18, p. 102) discusses what he calls the "concentric circle pattern" in relation to the fertility rites of Australian primitives. His treatment of the subject suggests that this might be a universal symbol for the "child and mother" area of experience. Freud (3, p. 375) of course made a good deal of this kind of symbolization. Alschuler and Hattwick (1) have found that rounded figures, or square ones, drawn with other geometrical forms placed inside, were characteristic of children's drawings shortly preceding the birth of younger siblings, and persisted for a time after their birth. These con-



FIG. 4. The single straight line pattern.

clusions support the Freudian hypothesis that forms-within-other-forms are symbols of intra-uterine existence or maternal protection. Alschuler and Hattwick have named the pattern "the container configuration."

The relationship to both mother and siblings was expected to emerge from the drawings based on this pattern.

4. *The single straight line pattern.* (Fig. 4). "Maleness" is considered to be another basic human experience. The reasoning in selecting "maleness" as one of the commonplace areas of experience is the same as that used in the selection of "femaleness."

Freud (3, p. 368), generalizing on the shape of the male sex organ, is responsible for the generalization that, in dreams, oblong objects symbolize the quality of "maleness." Buck (4) in a cautious statement, has also intimated that, in his H-T-P test, a tree might carry phallic significance. Alschuler and Hattwick (1), in their study, have more fully confirmed Freud's generalization by showing that straight lines or elongated figures are connected with aggressive moods of the more "masculine children." When frustrated, Alschuler and Hattwick found, children cross out the straight lines, or draw them horizontally instead of vertically. In Franck's (7) study, "masculine design" consisted of elongated forms. She found that, on the basis of round



FIG. 5. The crossline pattern.

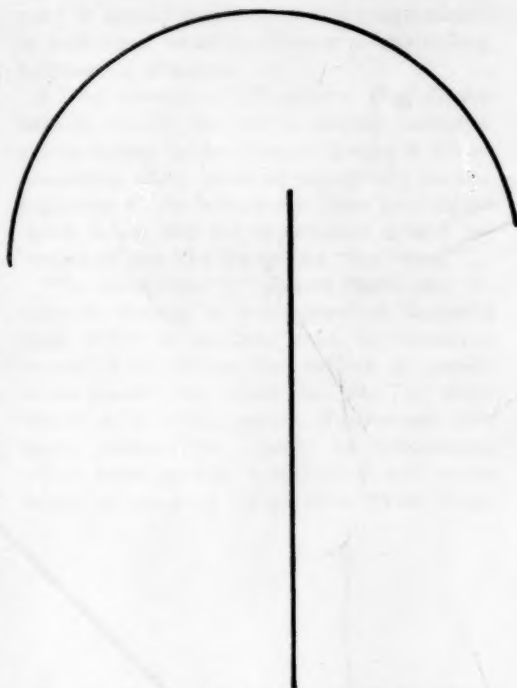


FIG. 6. The semi-circle and single line pattern.

forms or straight lines, she could differentiate those who preferred the "feminine" from those who preferred the "masculine." Finally, Immergluck and Cohen (11) have found a definite relationship between stimulus words such as "father" and vertical lines.

The straight line was thus selected as the symbol for "maleness." The drawing responses based on this pattern were expected to reflect the subject's attitudes toward males and the nature of his or her experience with males.

5. *The crossline pattern.* (Fig. 5). "Male society" must be considered as basic a human experience as is "female society." The same logic as was used in the selection of "female society" as an area of common experience was hence applied to the symbolization of "male society" also.

It was considered that, if one line represents "maleness," two crossing lines might be assumed to represent some form of interaction between males. The pattern here evades the possibility of association with such consciously perceived cultural patterns as a cross or the letter "X."

If the basic hypothesis is correct, this pattern was expected to stimulate drawings having reference, in a male subject, to another man and, in female subjects, to men in general.



FIG. 7. The lines and semi-circles pattern.

6. *The semi-circle and single line pattern.* (Fig. 6). Interaction between the two sexes is as universal as the existence of both sexes in any society.

In order to symbolize such interaction, a combination could be made of the previously discussed symbols for "maleness" and "femaleness." The combination as given in this stimulus-pattern should imply relationships with members of the opposite sex, if the meanings ascribed to these figures *individually* are as claimed.

7. *The lines and semi-circle pattern.* (Fig. 7). The attitudes expressed in any intimate heterosexual situation are not always the same as those shown in a competitive heterosexual situation. However, the latter may also be assumed to be a common area of experience.

The field, in this case, contains several hypothetical symbols for "maleness" and "female-

ness." It seemed possible that this design might, in both sexes, evoke reactions to a competitive heterosexual situation.

8. *The incomplete "U" pattern.* (Fig. 8). An attitude toward the self is another universal among human beings living in groups. A stimulus-pattern which offers an opportunity for the projection of the self-concept must be a figure which is not like the hypothetical symbol for "maleness" nor like the one for "femaleness."

The incomplete "U" pattern fulfills this description because it is composed of elongated lines which, at the same time, are somewhat curved. This enables the subject to project either pattern with equal ease. The "U" shape seemed to be such a pattern. Furthermore, this figure possesses the quality of inclusiveness which might provide a subliminal cue to the subject in answer to the question: "What is con-

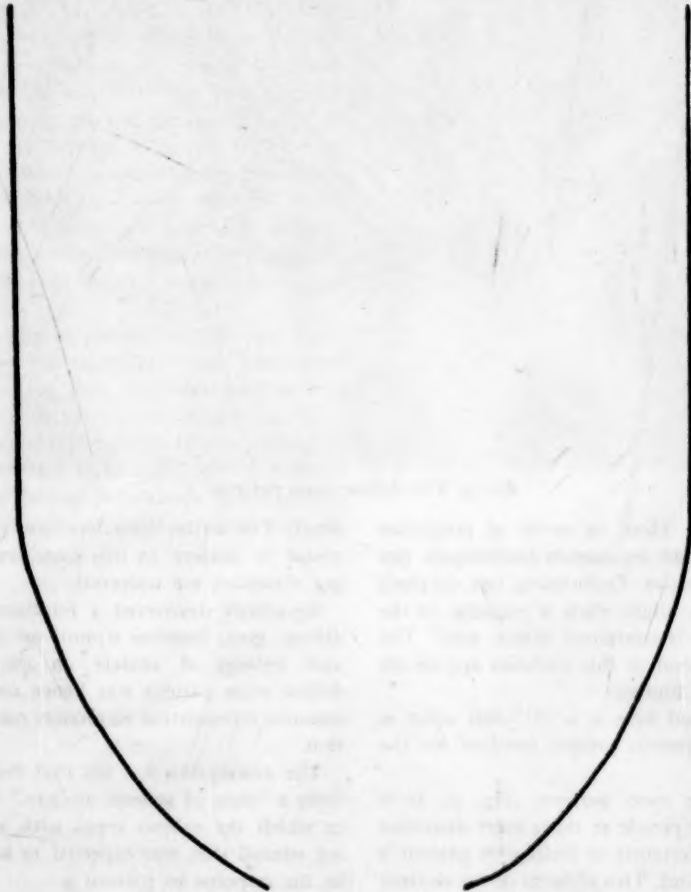


FIG. 8. The incomplete "U" pattern.

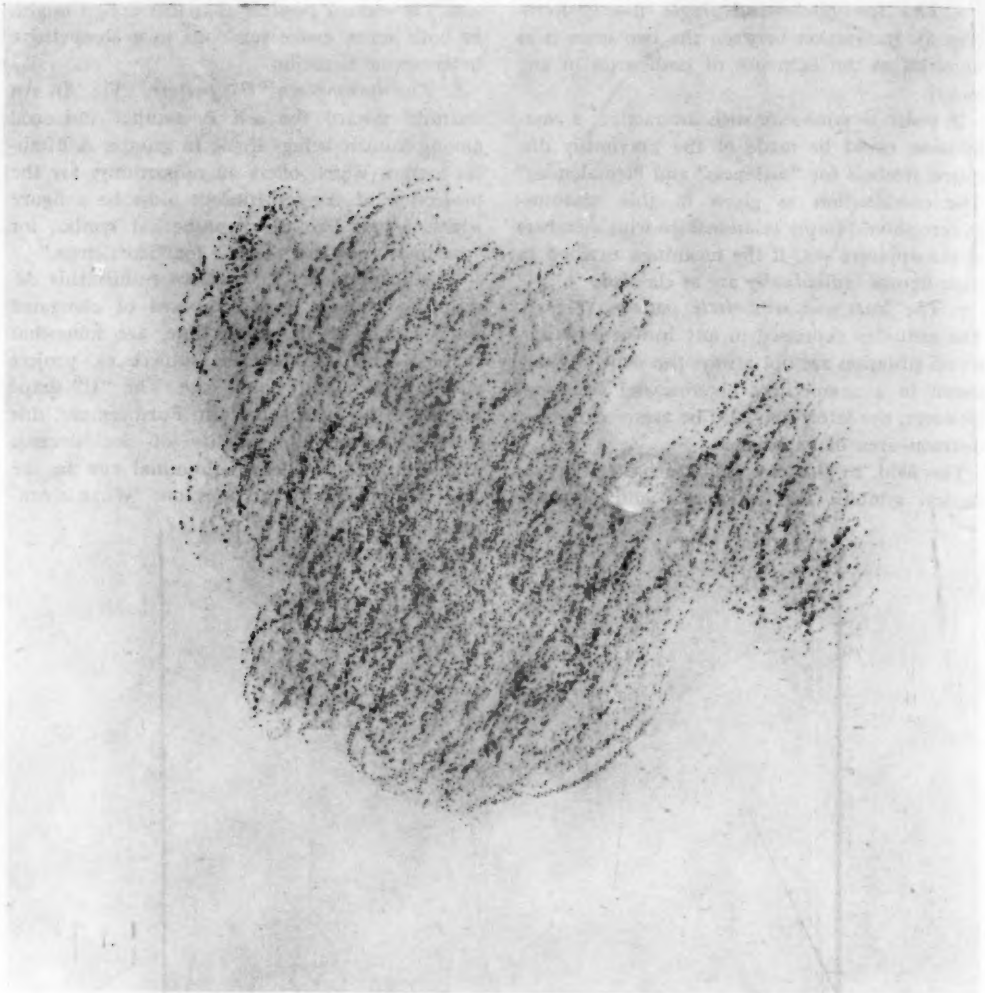


FIG. 9. The diffuse mass pattern.

tained therein?" Thus, in terms of projection theory, as applied in current techniques (see section on *Projective Techniques*, last chapter), the "U" pattern might elicit a response to the question "What is contained within you?" The subject can respond to this question apparently only in terms of himself.

The figure used here is a "U"—left open at the bottom to permit greater freedom for the subject.

9. *The diffuse mass pattern.* (Fig. 9). It is assumed that all people at times meet situations which cause uncertainty of feeling, or present a threat of some kind. This element of uncertainty is further assumed to carry with it negative

affect. The writer considers this to be what is meant by anxiety. In this sense, anxiety-provoking situations are universal.

Rorschach discovered a relationship between diffuse, grey, formless stimuli on the one hand and feelings of anxiety on the other. The diffuse mass pattern was hence used here as a stimulus representing an anxiety-provoking situation.

The assumption was not that everyone suffers from a "state of general anxiety." It is the way in which the subject copes with anxiety-arousing stimuli that was expected to be ascertained by the response to pattern 9.

10. *The inverted "V" pattern.* (Fig. 10). Be-



FIG. 10. The inverted "V" pattern.

cause of the importance of sex-role patterning in any society, it was assumed that there are a sufficient number of situations with sexual significance (causing uncertainty of reaction and/or evoking anxiety) for sexual anxiety to be considered a special area of human experience.

The pattern was suggested by the analysis of dreams of psychiatric patients. In their dreams, the inverted "V" pattern was related to sexual anxiety. This pattern was therefore included in the experiment to test the commonness of this association. Perhaps it is the formlessness of the pattern that is responsible for its anxiety-provoking function. Its discrete elements, which may be regarded as either masculine (angular points) or feminine (hollow figures), would probably be responsible for any sexual connotation it might have.

As in the case of general anxiety, the interpretation here was in terms of the individual's manner of coping with such situations as tend to provoke specifically sexual anxiety.

11. *The jagged-line pattern.* (Fig. 11). Hostility and aggression may be assumed to be a common experience of human individuals in our society, and in a multitude of societies other than our own.

The study by Immergluck and Cohen (11) confirms the plausibility of the assumption that the jagged-line figure evokes responses of aggression. These investigators have reported that jagged lines were frequently associated by their subjects with such words as "war" and "aggression." Dream material from psychiatric patients also confirms this assumption. The association between a jagged line and the concepts of speed or force might be responsible for the tendency of this pattern to disclose hostile or aggressive impulses.

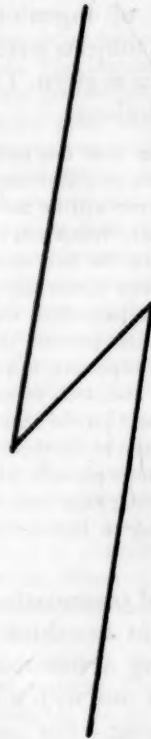


FIG. 11. The jagged line pattern.

CHAPTER II

PROCEDURE

A. PRESENTATION OF STIMULI

THE first step in approaching the subject was to make it clear to him that what he was about to do was in no sense a test of his art ability. When pressed for an explanation, we have occasionally told subjects that the procedure was a "kind of test of ingenuity." However, almost always subjects were content with the instructions as given. The usual statement was as follows:

You will notice that the first sheet here has nothing on it.¹ You may draw anything at all with these pencils. There will be no time limit; take as long as you wish. When you have finished the first drawing, turn the first sheet and take the second sheet by this corner (demonstrating) and flip it over. [This procedure was to accomplish two things: one, to prevent the subject from seeing the stimulus-pattern before he was ready to draw upon it; and, two, to make certain that the pattern was seen in the same position by all subjects.] On the rest of the sheets, you will notice there are some lines already present. You may again draw anything that suits your fancy, but on these sheets try to include the lines, if possible.

The order of presentation of the stimulus material in two-thirds of the cases avoided placing a stimulus-pattern immediately after one with a related hypothetical meaning. For example, the "maleness" pattern (Fig. 4) was separated from the "male group" (Fig. 5) pattern. This was to prevent carry-over of ideas which might make it difficult to establish the stimulus-pattern to which the subject was reacting. The one purposeful

¹ In the presentation of the stimulus-patterns, each subject was given a blank sheet of paper on which to make a "free drawing." The purpose of this was to offer an opportunity for expression of attitudes which were brought into the experimental situation. Analysis of these drawings is not necessary to test the hypothesis of universal symbolism.

exception was the placing of the sexual anxiety stimulus before the one for general anxiety. It was feared that otherwise, especially in our society, a subject might react to the general anxiety stimulus in sexual terms, when he could react in other terms if first given a chance to "drain off" sexual anxiety. There remains a question of whether placing the sexual anxiety stimulus first might not arouse feelings which would then artificially influence performance on the general anxiety pattern. The writer believes that the answer lies in the release of tension provided by an expression of attitude or "catharsis." Since the subject was not merely expected to respond to certain stimulus-patterns (as in Rorschach or TAT) but given an opportunity for individualized expression by even changing the stimuli, it was felt that a certain order of presentation of the stimulus-patterns was indicated. To justify this order, and as a control, random order was used in the last third of the cases.

When the drawings were completed, a sheet of paper bearing the inquiry questions was presented with enough paper for the subjects to answer each question fully for each symbol. The questions read as follows:

- Question A. What is this a picture of?
- Question B. Was it relatively easy or hard to draw?
- Question C. Do you like it?
- Question D. What mood does it represent?
- Question E. (1) Describe in detail the personalities of any people (or animals) depicted. (2) What are they doing? (3) What are they thinking and feeling?
- Question F. What mood do you feel looking at it?
- Question G. What does it remind you of?

The average amount of time taken for the entire procedure by each subject was one hour.

When it was possible to do so, notes on the manner in which the subject worked were appended to each record. For example, when the subject became suddenly tired while working on one symbol and expressed the fact to the test supervisor, the matter was noted, particularly in terms of the symbol upon which the subject was working at the time. For most of the cases used in this study, of course, it was not possible to make such observations because of the difficulties encountered in group administration.

When the drawings and answers to the inquiry questions had been collected, the next step was to analyze them in terms of the hypothetical meanings of the stimulus-patterns. The section following describes in detail what this process involved.

B. ANALYSIS OF STIMULUS MATERIAL

Three major sources of data were available for the interpretation of these stimulus-patterns. The first was the *manner of drawing*; the second, the *content of the drawing*; and the third, the *verbal associations* as revealed by the subject in statements on the inquiry.

The *manner of drawing* on the stimulus sheets was not given systematic emphasis in the analysis of any single drawing by itself. Valuable information about a total personality may be gained by the application of free-drawing-analysis techniques to the manner of drawing. In this study, however, a complete understanding of the personality of each subject was not required. For this reason, the manner of drawing was analyzed only when there seemed to be outstanding differences between one drawing and the rest of the subject's set of responses. When this occurred, such matters as the use of color, the "goodness" of a particular drawing in relation to the quality of drawing on the other

sheets, and the general *Gestalt* of the drawing, i.e., whether there had been closure of the figure and whether the whole sheet was used, etc., were taken into account. In this context, such factors as these helped clarify the subject's responses to the individual stimulus-patterns.

The *content of a drawing* is often obviously related to the hypothetical symbolic meaning of the stimulus-pattern. Thus, for example, one subject drew a baby-in-bunting out of the concentric semicircle pattern, and labelled it "A baby which unfortunately looks like an adult." The implication here is that the subject acknowledges mother-dependence and yet accepts status as an adult. The inquiry, of course, was of the essence. But even where no inquiry was conducted (as in the group of normal children), the subjects often spontaneously labelled their drawings. When they did not do so, the content was sometimes so obscure that it was impossible to tell what it was, or what it might mean to the subject. At times, of course, it may be possible to make some interpretation about the personality from the content of the drawing alone, even when the content is not quite as obvious as in the example cited at the beginning of this paragraph. For instance, when a drawing is labelled, but no further inquiry is available, the following might still be interpretable at the risk of subjectivity. For example, lollypops might be presumed to imply positive affect; targets might be said to imply goal-direction; moons might be presumed to connote remoteness; etc. Such interpretations, however, offered without the subject's verbalizations, could never be made without misgivings.

Answers to the *inquiry questions* provided *verbal associative material*. Consequently, when answers were available, as they were for most cases in the study, they made interpretation defensible. The answers to the questions as to what the drawing was, whether it was easy or difficult to draw, and whether or not the subject liked it, details about the "personalities" depicted, and any other material which the subject might associate with his drawing, were straightforwardly given by most subjects. The replies to the questions on liking the picture and ease of drawing it were always usable for further interpretation. Various other replies could be analyzed in terms of the subject's liking or disliking of the picture and his ability to draw easily when presented with a particular pattern. The possibility suggested itself here that a

subject might like a particular stimulus-pattern, but still not draw well upon it, nor like his own product. When this happened, subjects were likely to specify that they disliked their execution of the pictures, but not the concepts they had in mind. The subjects themselves thus helped in the interpretation of the inquiry.

The two questions about "mood" (mood of the picture and mood it evoked in the subject) provided further information about how the subjects evaluated their own responses to the stimulus-patterns. It is interesting to note that the responses to the two questions about mood were usually not the same, although they were most often complementary. An example of this is the statement that the mood of a given picture was "horror," while the feeling evoked in the subject was one of "considerable discomfort." When the subject is in conflict about the symbolized area, the various inquiry questions usually stimulate different affectual tones in the various replies. For example, the mood of a given picture could be "horror," while the feeling evoked in the subject might be described as one of "fascination." The answers to the questions about liking the picture and the ease with which it was drawn are basic to the rest of the analysis.

The method of analysis must also be understood in terms of the differences of approach required by the different stimulus-patterns. Following is a discussion of the analysis in terms of each stimulus-pattern.

The *semi-circle pattern* (Fig. 1) has been assumed by other investigators to evoke responses to "femaleness." In order to make specific interpretation of a subject's responses to the symbol of "femaleness," it is, however, necessary to establish a relationship between the concept and certain areas of the person's developmental history. The assumption was that responses to the concept of "femaleness" could be proved to be based upon contact with members of the female sex. It was further assumed that the subject's concept of "femaleness" could be shown to be influenced by his or her earliest or strongest experiences with a member of the female sex. Since, for most people, this member would be the mother and/or mother-surrogate, the interpretations based upon the drawings on the semi-circle pattern were taken to relate to the mother and/or mother-surrogate.

Similar logic applies to the straight-line pattern (Fig. 4). This pattern is related to "maleness." Here, as in the case of the symbol for "femaleness" (Fig. 1), it was assumed that the subject's modification of the symbol might be in terms of his generalizations from the male figures who had made the strongest impression upon him. In most cases, this would be the father and/or father-surrogate.

In connection with the figures for "maleness" (Fig. 4) and for "femaleness" (Fig. 1), there are two points of theoretical interest. The first is the extent to which identification on the part of the subject with either parental figure might influence his drawing. The self-concept might thus enter to a degree. In other words, the subject might identify with the one or the other of his parents. Then, in reacting to the appropriate stimulus-pattern, he might indicate characteristics which are true of himself, but not of the parent. When this happens, however, he still reveals his concept of "maleness" or "femaleness," as the case might be. For example, a boy who had identified with his father drew a "scale of justice" out of the straight line. On the inquiry, he stated that it was easy to draw, that he liked it, that its mood was "idealism," evoking in him a mood of "determination." Finally, it reminded him of the "frailties of man."

The interpretation was that there was a positive relationship between the subject and his father, and that the subject somehow derived from his father his ideals and ambitions. From the last association on the inquiry, however, it seemed that the father probably had shown some significant weakness which was important to the boy.

Case history material brought out the following facts: When the boy was a year old, his father was dismissed from the police force for bribery. The relationship between father and son was a good one, and the boy adopted his father's walk and manner of speech. At the time of testing, when the boy was seventeen years old, he expressed interest in law with the idea of regaining honor for his family. He was already well known in his community for his honesty, forthrightness, and high ideals of citizenship. Thus it may be seen that a subject may show clear identification with the parent and on the appropriate symbol include his own traits as well as information about the parent.

The second point of theoretical interest concerns those cases where the subject drew male

figures on the semi-circle (Fig. 1) and female figures on the straight line (Fig. 4). The assumption made here was that the subject was still expressing his concept of "maleness" or "femaleness," but that he viewed these in terms of reversal of the usual roles. Thus the drawing of a man's face on the semi-circle has been shown in various cases to be related to experience with a domineering mother.

At first the writer considered the possibility that a person might respond to the "femaleness" pattern (Fig. 1) in terms of a male figure because of association with weak males. Similarly, it did not appear certain that a female figure drawn on the straight line referred to weak males rather than to strong females within the realm of the subject's experience.

The inquiry material resolved this dilemma. It was usually clear from the answers exactly which parental figure was involved. For example, one subject drew a grim-looking bald-headed man out of the semi-circle (Fig. 1). The straight line became part of a hotel described as being in total darkness because all of "the lights are out, and everyone is over at the tavern across the street." Further, the bald-headed man was called a "business man who knows his stuff," and while the mood evoked in the subject was one of "admiration," yet he stated that he did not like the picture. On the other hand, the mood evoked in the subject by the straight-line drawing was that of "longing," and he expressed a liking for the picture.

The case history showed that the mother was a strong, determined woman who managed the family budget. The father was characterized as a relatively weak man who worked as a traveling salesman, and tended, when not controlled by his wife, to seek satisfaction in drink. The subject was described as being more fond of his father than of his mother. However, the father's occupation prevented close companionship with the subject.

This kind of check, bolstered by numerous examples, lent strong support to the hypothesis (see case analyses and validation data) that the semi-circle (Fig. 1) is related to "femaleness."

The *crossline pattern* (Fig. 5) and the *counter-opposed semi-circle pattern* (Fig. 2), because they both represent plural situations, would seem to focus the subject's attention upon social aspects of his attitudes toward "maleness" and "femaleness," rather than his attitudes toward individual figures who might be prototypes of

his concepts of "maleness" and "femaleness." Thus, the interpretations made (see validation material and case analyses following) on the basis of the drawings evoked by these two stimulus-patterns relate to the subject's attitudes toward the male and female members of his group, as he feels toward them "en masse," so to speak. The kind of social technique which an individual may use often varies with the sex with which he is dealing. This kind of difference stands out clearly in the drawing material and, when it occurs, note is taken of it in the analysis. For example, on the *counter-opposed semi-circle pattern* (Fig. 2), one subject drew a line connecting the two arcs at the top. This he called a table. The *crossline pattern* (Fig. 5) he turned into a pair of sabres held by two opponents. From the content of the drawing and the inquiry material, it was concluded that the subject considered himself to be a source of support to women in the "strong silent" manner. The manner of drawing was of help in making this interpretation also, because it has been observed that use of the space between the areas seems to be characteristic of those who wish to establish that they are not identified with the female group. The interpretation on the second drawing was that the subject was generally antagonistic to those of his own sex. Case history data, and the information given by the subject's psychiatrist for validation purposes, confirmed these interpretations.

There are two stimulus-patterns that are combinations of the male and female symbols. The first one to be considered here consists of *one semi-circle and one straight line* (Fig. 6). Being a combination of the male and female symbols, this pattern, in the relationship represented, appeared as if it might have relevancy to the intimate heterosexual situation (see case analyses and validation data). The kind of specification on this symbol that a given subject makes depends presumably upon the range of his experience and often on his age. The subject may or may not relate this stimulus-pattern to experiences of physical contact. The subject's interpretation tends to be in terms of his attitude toward a close relationship between two people, one of each sex.

The second combination consists of an arrangement of more than one of each sex-symbol in the field (Fig. 7). This arrangement is such as to suggest competition between members of the same sex for those of the opposite sex (see tabular

material on this pattern). Again, the degree to which sexuality, in the sense of physical contact, is involved depends on the subject.

An example of how the attitude toward the intimate heterosexual situation may vary from the one expressed for the competitive heterosexual situation is the following: A subject drew on the intimate heterosexual stimulus-pattern what he called "a balloon drifting lazily toward the earth." On the competitive heterosexual stimulus-pattern (Fig. 7) he drew a "dart game in which each guy sees who can get more." The interpretation was that the subject felt stimulated by competition with other men for women, but his aggressiveness did not extend to the intimate level, where he developed a more passive attitude. This analysis was in accord with the subject's own appraisal of his behavior. Of course, other subjects show the opposite attitude, withdrawing from the competitive heterosexual situation, but becoming assertive when secure in an intimate heterosexual situation. Most often, the attitudes expressed on the two stimulus-patterns are complementary.

The *incomplete "U" pattern* (Fig. 8) permits of ready projection of a face, but also of a different use, if the subject is not inclined to draw a face. This seems to offer an opportunity for the expression of attitudes relating peculiarly to the self. Again, the method of modifying the symbol is taken into account in the analysis. However, particular stress is laid upon the content of the drawing in making interpretations as to the self-concept.

The most frequent response is the drawing of a vessel of some sort, usually a glass or vase. Such containers are passive receptacles, and imply an attitude of passivity on the part of the subject. At least, we have so interpreted them in our analyses (check against tabular material on the pattern involved). A striking example was the drawing of one male subject who labelled the main figure a pot, drew a fire underneath, and stated that it was the "common pot for all the bums who keep taking from it." The case history shows that the subject was a member of a large family in which he was known as the "good one." He was considered to be the person to ask for any favors. Particularly interesting was the fact that each member of the family said that he was shamefully imposed upon by all the others, but no one admitted imposing upon the subject. Living with his younger brother in college, he did the housework and

cooking for both; and also lent his brother much money from his own government allowance, even though his brother was receiving the same monthly amount. At the time the drawings were administered, the subject was seeking psychiatric aid in adjustment to marriage. He felt that advantage had been taken of him in arranging the marriage, and he felt that he "suddenly couldn't take it any more." These facts would seem to confirm the interpretation of his drawing, which was that the subject felt himself to have played a passive role in which others had taken advantage of him. Not all subjects who draw passive figures on this stimulus-pattern indicate conflict about it, of course. Also, drawings other than those of vessels may indicate a passive element.

Often faces are drawn, and in the inquiry they may bring forth any emotion in the human range. The guiding principle in interpreting reactions to the incomplete-U pattern is that the self-concept alone is revealed. If an individual has misconceptions about himself, they will be in evidence. Thus, a strikingly beautiful girl with an I.Q. of 152 (Wechsler-Bellevue) and various college honors, including Phi Beta Kappa, said on the inquiry about the face she had drawn on the incomplete-U pattern (Fig. 8): "She is silly, shallow, vain, and quite unworthy—not even really pretty." When asked for her real opinion of herself during the interview this subject spent eight minutes telling why she was not actually as personable as most people seemed to believe. Naturally, misconceptions about the self can be in the direction of self-flattery, also. In any case, it is how the subject regards himself that is sought in the validating data for the incomplete-U pattern interpretations.

In the symbols for sexual anxiety (Fig. 10), general anxiety (Fig. 9), and aggression (Fig. 11), the analysis was focused on two possibilities: First, and most important, the manner of handling, i.e., the degree of structuralization added by the subject, and the way in which this was accomplished. By way of example, we might take the subjects who do not draw anything on these stimulus-patterns. Failure to use this pattern might mean that, when confronted by an anxiety-provoking situation, the subjects could not focus on them even though told to try to do so. The analysis, then, should be that the subject could not deal effectively with the type of situation symbolized.

In other cases, the subjects made a stimulus-pattern an integral part of a more complete drawing. Thus, the aggression-stimulus (Fig. 11), might be used as the side of a building. In such an instance, the analysis would be that the subject reacts to aggression situations constructively, as much because of the constructive use of the stimulus-pattern as through the content of the drawing.

The second aspect of the analysis referred to the content of the drawings made on these three stimulus-patterns. It was felt that the content might reveal the kind of experience the subject tended to relate to the stimulus-pattern. Thus, a subject who called the general anxiety stimulus-pattern "dirty combings" was considered to be concerned with matters of cleanliness. On a personal inventory form, this subject indeed stated: "Cleanliness is next to godliness." She was under treatment for compulsive symptoms, including compulsive washing.

The semi-circle within a larger semi-circle pattern (Fig. 3), or regression symbol, relates to the subject's attitudes toward the mother. However, it is especially important in revealing the subject's security strivings as contrasted to a sense of emotional independence. All interpretations contain reference to this point. The manner in which the subject handles the stimulus-pattern is frequently important in analyzing responses to this stimulus-pattern. For example, it is possible to "close" the figure in different ways. One way is to complete both circles (e.g., automobile tires). Regardless of the implications of the content, completion of the circles in this manner could be interpreted to mean a dependency (regressive) reaction. The logic here is that the structuralization involved tends to emphasize the circle-within-a-circle pattern. Some subjects connect the parallel ends of the two circles (e.g., a "bitten-off doughnut"), emphasizing emptiness. Here interpretation must take into account the fact that the subject has given up expecting maternal protection. Emotionally independent, he feels free to manifest aggressive behavior. This kind of analysis has been substantiated by the validating material.

The importance of the content is evident in this pattern also. The inquiry material often sheds light on sibling relationships as well as the attitude toward mother dependency. One subject, aged eight, made a "flat car tire." On the inquiry he made it clear that this had been caused by a sudden deflation. The interpretation

was that he had been relatively secure and dependent in attitude, but that a recent shift in interpersonal relationships (probably with his mother) had suddenly left him feeling insecure. Case history material showed that his first younger sibling had been born three months prior to the time of drawing. As the youngest member of the family until this happened, the subject had been the "family pet," and used to spend most of his free time trying to help his mother with her housework. He was described as bewildered by the sudden loss of constant maternal attention. These facts support the interpretation of his drawing.

Further examples of the method of analysis are given in two complete cases included in a later chapter.

C. VALIDATION DATA FOR EACH SUBJECT GROUP

This study comprises data on 169 subjects. Of these, 157 are white Americans and 12 are American Indians. They are almost evenly divided as to sex, and range in age from six to sixty-nine.

In all cases, blind analyses of the drawings were made first. Then, specific interpretations were checked against validating data. The sources of validation varied with the group, and are completely described in this section. The same rating system was used in all groups, however, to express degree of agreement between the analyses and the validating data. This system is fully described in the following sections. It provided a checking system in terms of the following possibilities: *Complete Corroboration*, *Partial Corroboration*, *Conflicting Evidence*, *Partial Conflicting Evidence*, *Complete Contradiction*, *Partial Contradiction*, and *No Evidence*.

The subject groups and data available for checking the validity of drawing interpretations follow:

Group No. 1: NORMAL CHILDREN

Description: This was a group of 30 public school children, evenly divided as to sex, and all approximately 13 years old, considered a part of a "normal" population.

Method of Validation: This group has been the object of concentrated study as part of a program of cooperative effort by psychologists, social anthropologists, sociologists, and other members of the Committee on Human Development at the University of Chicago. The various workers, operating independently, employed different techniques of study. The kinds of materials which were utilized and analyzed independently by the various members of the conference team were as follows: case history material; interview data obtained from parents, teachers, peer groups, and subjects; socio-economic class ratings; sociometric data; Rorschach test; Thematic Apperception Test; personal inventory tests, such as the California Personality Test; essays on such topics as "The Person I'd Most Like to be Like"; and material on the development of moral conscience. A year after investigations were completed, the stimulus-material for this study was administered. A clinical case conference was held in each case, at which time there was a critical examination of the findings obtained by each technique (excluding the present ones). The summary transcripts of these conferences were used as validating data on the present group of cases.

The drawings completed by the children were analyzed without knowledge of more than their age and sex. Inquiry questions were not administered to this group. The interpretations derived from the drawings were rated with reference to degree of agreement with the clinical

case conference conclusions. In each case, the investigator compared her interpretations with the independent clinical summaries. Each point of the present diagnoses was rated on degree of agreement with the validating data. The rating system is described in a later section.

Group No. 2: NORMAL ADULTS**SUBGROUP A—VOCATIONAL GUIDANCE GROUP**

Description: There were two subgroups making up the normal adult population of this study. One consisted of people who applied for vocational guidance at a general psychological clinic. There were 13 men and 11 women, ranging in age from 17 to 61 years. None of this group of subjects exhibited a psychiatric syndrome, either clinically or in test findings. They are consequently regarded as members of an essentially "normal" population.

Method of Validation: All members of this subgroup were given a battery of tests investigating personality structure, including: the Rorschach Test, TAT, Szondi Test, and the California Personality Test. In addition, there was a prolonged conference between the subject and a professional psychologist, during which the test results were discussed. This psychologist used the test findings and his notes on the conference as the basis for his rating of the writer's blind interpretations. As in the other groups, each point of interpretation was compared with the validating data and rated on degree of agreement with these data.

Group No. 2: NORMAL ADULTS**SUBGROUP B—VOLUNTEER NORMAL ADULT GROUP**

Description: The second subgroup consisted of 30 adults, evenly divided as

to sex, and ranging in age from 18 to 49 years. They had all had some amount of college training, and all had volunteered to take part in this study. None of this group had ever been required to seek psychiatric aid, and therefore they were considered to be members of a relatively "normal" population. Some members of this group were doing advanced work in psychology. None of them, however, indicated any familiarity with the theoretical implications of the drawing-task.

Method of Validation: In many cases of the other groups (such as 3 and 4), the interpretations were concerned with material which, because of their emotional conflicts, the subjects could not be expected to discuss. It was, therefore, considered desirable to have a group of normal subjects for whom conscious acceptance of the interpretations might be the criterion for validation. The analyses were written in a manner providing specific points for judgment. Generalities such as "manner of handling anxiety" were carefully avoided. As much as possible, the subjects were asked non-leading questions, and encouraged to elaborate upon their answers.

Group No. 3: CHILDREN WITH BEHAVIOR PROBLEMS

Description: This group consisted of 13 children who were under treatment for behavior disorders. They ranged in age from 6 to 16 years, and were nearly evenly divided as to sex. Their symptoms ranged from relatively mild to relatively more severe types. As in the case of the adult psychiatric group (see below) no special account was taken of the individual diagnoses. These subjects were being treated by two therapists.

Method of Validation: The list of

interpretations based on the drawn material was submitted to the therapist treating the case. The therapist, using his clinical notes for reference, scored the interpretations in terms of the system previously described.

Group No. 4: ADULTS IN PSYCHOTHERAPY

Description: This group consisted of 60 adults, men and women, ranging in age from 17 to 69. All of them were under treatment for psychiatric disorders at the time the drawing material was administered. These subjects were treated by three therapists. The diagnoses and symptoms of these patients varied from the mild neuroses to diagnosed schizophrenia. However, for the purpose of this study, no differentiation was made among the members of this group in terms of types or symptoms. The relationship between specific disease types and responses to the stimulus pattern must be left to future research. The purpose of including these subjects is to test the hypothesis that the symbols are meaningful to people with emotional aberrations in the same way as they are to others.

Method of Validation: The list of interpretations based on the drawn material was submitted to the therapist treating the case. The therapist, using his clinical notes for reference, scored the interpretations in terms of the system previously described.

Group No. 5: INDIAN GROUP

Description: This was a group of twelve children, all approximately thirteen years old. There were eight girls and four boys. Seven of the children belonged to the Navaho, Zuni, and Papago

tribes. These are all matricentric tribes. The others belonged to the Sioux tribe, which is patricentric. There are other differences, in that the Sioux are considered to possess a disintegrating culture, while the others are not.

Method of Validation: These children were part of a group studied in 1943 in the Research on Indian Education of the Committee on Human Development. At that time, material was gathered in the form of autobiographical notes, case histories, TAT, Rorschach tests, and free drawings. The process of using this material for validation purposes was the same as in the case of the normal children's group.

D. SYSTEM FOR VALIDATION-RATING

Seven rating categories were used to indicate the relationship between the interpretations on the drawing materials and the validating material. As previously noted, these were *Complete Corroboration*, *Partial Corroboration*, *Conflicting Evidence*, *Partial Conflicting Evidence*, *Complete Contradiction*, *Partial Contradiction*, and *No Evidence*.

The same system was used for all the groups regardless of the source of validating material. Fuller explanations of the rating categories are given below. Examples taken at random from several different cases are included. These cases are all from the Normal Children's group. It will be recalled that validating statements were available for direct quotations from the transcripts of Rorschach, TAT, and other test records, and from conclusions of independent workers in a clinical case conference on each case.

Plus (+) was used to indicate *complete corroboration* of the interpretation by the validating material. Only when the nature of the evidence consisted of an

identical paraphrase of statements used in the blind interpretation was this scoring used.

Examples of Plus Scoring

1. Interpretation:

"Handles anxiety generally through evasive generalization."

Validation:

"Anxiety motivates over-all adjustment pattern. Seen in all projective materials in a hesitancy, evasion, and cover-up pattern." (Summary transcript of clinical case conference)

2. Interpretation:

"Sexual anxiety controlled: fantasy methods."

Validation:

"Sexual anxiety controlled through fantasy." (Summary transcript of clinical case conference)

3. Interpretation:

"Finds security in companionship with those of same sex."

Validation:

"Personal achievement (sports) closely tied to sense of loyalty to group and need of recognition from the group."
"Close identification with young men."
"Plays with older boys on equal terms."
"... He is aware of masculine peer group expectations and trying to live up to them." (All the above quotations are from the clinical case conference)

4. Interpretation:

"Self-concept: very masculine."

Validation:

"Very high masculine score." (Masculinity-femininity profile)
"Strong male self-concept." (Essay material)

Partial-Plus (P+) was used to indicate *partial corroboration*, that is, partial evidence of a corroboratory nature. In all cases where there was some question as to whether a "+" or a "P+" was applicable, the "P+" was used.

Examples of Partial-Plus Scoring

1. Interpretation:

"Playful attitude as method of adjusting to competitive heterosexual relations, always with controlled attitude."

Validation:

"Satisfactory adjustment to heterosexual

role on interest level." (Interpretation of California Personality Test in clinical case conference)

2. Interpretation:

"Feels mother-rejected."

Validation:

"Mother impersonal." (Summary and interpretation on interview material in clinical case conference)

3. Interpretation:

"Oral fixation."

Validation:

"Breast-fed for almost a year." (Case history)

4. Interpretation:

"Heterosexual relations on a close basis are repulsive and threatening."

Validation:

"Possible passive homosexual adjustment." (TAT)

"Low heterosexual interest." (TAT)

Plus-Minus (\pm) was used to indicate *conflicting evidence*. Sometimes, in cases where the validating material consisted of compilations of reports on the subjects by different workers, the amount of information present in the record was not sufficient to explain seemingly conflicting results from the different techniques employed. In such cases it was assumed that we could not judge whether the evidence supporting or contradicting our interpretation was correct. The " \pm " sign was used to denote this condition.

Examples of Plus-Minus Scoring

1. Interpretation:

"Positive attitude toward individual heterosexual contact."

Validation:

"Seeks transference from mother to 45-year-old neighbor woman with whom he goes fishing." (Case history interpretations in clinical case conference)

"Not interested in girls." (Case history)

2. Interpretation:

"Hostility freely expressed."

Validation:

"Characterized by temper outbursts." (Case history)

"Considered submissive and cooperative." (Sociometric)

Partial-Plus-Minus ($P\pm$) was used to indicate *partial conflicting evidence*, that is, partial evidence which at once supported and contradicted

the interpretations, when this evidence was inconclusive in both directions.

Examples of Partial-Plus-Minus Scoring

1. Interpretation:

"Hostility toward mother."

Validation:

"Mother torn between need for control and laxness because of subject's charm." (Case history interpretation in clinical case conference)

Minus ($-$) was used to indicate *contradictory evidence*.

Examples of Minus Scoring

1. Interpretation:

"Expects coldness from girls."

Validation:

"Girls show interest in him." (Sociometric)

2. Interpretation:

"Mildly compulsive in control of sexual anxiety: chief source of control in attitude of repulsion."

Validation:

"No sexual anxiety." (TAT)

Partial-Minus ($P-$) was used to indicate *partial contradiction*, that is, evidence of a contradictory nature.

Examples of Partial-Minus Scoring

1. Interpretation:

"Experimental mood with regard to competitive heterosexual situation."

Validation:

"Prognosis toward satisfactory heterosexual adjustment not favorable." (TAT)

2. Interpretation:

"Sees male figures as sources of support."

Validation:

"Does not play with boys of peer group very much." (Case history) (No information available on father or other non-peer males)

The category, *No Evidence (O)*, was used to indicate lack of evidence in either the positive or negative direction as to the validation of the interpretation. It was used when no statement could be found anywhere in the case record which shed light even remotely upon the hypothesis scored. As the examples above should make clear, conservatism was the rule throughout, and any statements which seemed to modify the scoring at all were included. This symbol

was also used when the subject did not answer the inquiry questions, and the content of his drawing was obscure.

Further examples of how this scoring system was used may be found in Case A in the Appendix.

E. CHECKS FOR RELIABILITY

The checks for reliability of procedure varied with the subject groups because of the differences in method of validation. For this reason, the following discussion has been organized in terms of the subject groups. Subsequently, reliability checks on the methods of this analysis will be discussed.

The Normal Children Group.—In the validation process for this group the writer selected statements from the validating data which seemed to her to have a bearing on the specific interpretations made of the subjects' responses to the stimulus material. This raised two problems of reliability. The first is whether the writer's selection of validating material was reliable; and the second is whether the rating made on the extent of agreement between the interpretation and the validating statements was reliable.

The reliability check of the writer's selection of validating statements from the validation data was made as follows: Questions were formed out of the interpretations of fifteen of the cases. Care was taken that the questions not be "leading." An interpretation such as "Hostility freely expressed" was changed to "How is hostility handled?"; "Mother affectionate" was changed to "How does subject interpret mother's attitude?" An independent worker was then given these questions as set up, and asked to find, from the complete clinical case conference data which had been gathered,

statements, if any, answering the questions.

As seen in Table 1, the checker's material was identical with the writer's in 84% of the cases. The reliability of the validating statements is underscored by the remaining breakdown. The cases in which the checker found evidence, but the writer had listed none, was 2%.

The reliability check on the writer's

TABLE 1
RELIABILITY OF VALIDATING STATEMENTS
(Based on 215 Judgments)

Category	No.	%
Checker cited same material	181	84
Checker found different material	4	2
Checker found evidence where writer listed none	4	2
Checker found no evidence where writer did	26	12
Total	215	100

ratings was to give another independent worker the interpretations made on each subject, with the validating statements selected from the clinical material by the writer, and to ask her to make her rating independently. Her scores were then compared with those made by the writer. Complete agreement was found in 94% of the 76 scorings which had been calculated. Differences based on more than a half scoring value² were found in only 0.7% of the comparisons.

Adult and Problem Children Groups.—In the Normal Adult-Vocational Guidance Group, the Psychiatric Case Adult Group, and the Problem Children Group, validation ratings of the interpretations were made entirely by independent workers. The reliability check made for

² "A half scoring value" refers to the relationship between partial evidence and complete evidence, e.g., "P" and "+."

TABLE 2
RELIABILITY CHECK BY THERAPISTS

Group	% Agreement	% Change, $\frac{1}{4}$ Step	% Change, Full Step	% Change to or from "o"
Psychiatric Adult Group:				
Therapist A	98	1	0	1
Therapist B	96	2	1	1
Therapist C	82	5	4	9
Normal Adults, Vocational Guidance Group	93	7	0	0
Problem Children's Group:				
Therapist A	98	1	0	1
Therapist B	97	2	0	1

these groups, therefore, was to have the same workers re-rate a representative sampling of each group after two months. Table 2 summarizes the results. The percentages on this table express the ratio of agreement between the first and second ratings made in the several groups. These ratings were made by three therapists for the Psychiatric Adult Group, a clinical psychologist for the Normal Adult-Vocational Guidance Group, and two therapists for the Problem Children Group.

For the Psychiatric Adult Group, the percentages of agreements between the first and second scorings were 98 per cent, 96 per cent and 82 per cent respectively. The last figure is lower than the others because this therapist made more "no evidence" scoring the second time. He also completely reversed his earlier scoring on some interpretations. Even so, these high percentages of agreement permit confidence in the reliability of the validation processes used for this group.

For the Normal Adult-Vocational Guidance Group, the first and second scorings were identical for 93 per cent of the interpretations. In the remaining 7 per cent, there were no shifts greater than a half scoring value. These ratings are therefore considered to be thoroughly

validated for the Normal Adult-Vocational Guidance Group.

For the Problem Children Group, agreement between the first and second scorings was 98 per cent and 97 per cent respectively. This extraordinary reliability is probably explained by the fact that, in children, such factors as "oral-fixation" or "peer-group relationship" are more readily checked.

The Normal Adult Group was divided into two subgroups. One was the vocational Guidance Subgroup, validated by a clinical psychologist on the basis of clinical interviews, and standard test results. The second group was interviewed by the writer, and thus validated directly. Reliability of ratings for the latter subgroup was checked in the following manner: The percentages were computed for the number of interpretations of subjects' responses rated in the various categories. These figures were then compared for the two subgroups. Critical ratios were calculated for the percentages³ in the "complete corroboration" category. The ratios ranged from 0.23 to 0.47. Since 2.00 is the usual criterion of significant difference, these results indicate that

³ The percentages were expressed as proportions for this purpose.

there is very little difference between the two validation results. For this reason, the two subgroups are considered together.

Indian Group.—Since the validation method for the Indian Group was the same as that for the Normal Children Group, no new reliability checks seemed necessary.

Method of analysis.—Two checks were made on the reliability of the method of analysis. The purpose of the first check was to discover the ease with which another worker might learn to analyze this kind of material. Ten records were given to this worker, to whom the frame of reference used in the study was carefully explained. He was asked to analyze these records, and his analyses were compared with those made independently by the writer. The essential points were analyzed in almost exactly the same manner by both workers. For example, one subject drew a chest over the male figure pattern (Fig. 4). On inquiry, he described the chest as being "locked, but still a nice piece of furniture." One interpretation stated, "Subject has positive attitude toward father, but finds him inaccessible." The other said, "Subject is fond of father, but finds him hard to contact." No directly conflicting analyses were obtained. Judgments in which different points appeared to be emphasized were never found to be actually incompatible. As might be expected, the writer's previous experience with such material enabled her to make twice as many interpretations as were mentioned by the other analyst. However, in 96 per cent of the interpretations made by the two analysts which referred to the same behavior, there was no substantial differ-

ence in the points they had made. This agreement probably indicates the value of the inquiry statements used in guiding these analyses.

The second check dealt with the problem of whether the analysis of a record was modified by the analyst forming notions about the case from the first few responses of a subject, and subsequently making interpretations on the rest of the subject's responses in terms of these preconceived notions. Another person was asked to select at random a set of eleven subject responses to the stimulus-patterns from the complete materials at hand. This set of eleven subject responses was thus a composite record, in which each subject response was taken from a different case. Then the writer analyzed this composite as though it were a single subject's responses. In the analysis of the composite record, one interpretation was made about each subject response. The interpretations were compared with those originally made on the individual subject responses when they had been considered in their context. All eleven interpretations made in the check had been given in the original analyses also. Considering the eleven stimulus-responses, what seemed to be the central concept in each subject response formed the interpretation. All eleven interpretations proved to have the same central concepts previously connected with these subject responses. This check is possibly somewhat inconclusive because the writer was aware that the set-up was artificial. Nevertheless, this procedure has made it seem unlikely that the analytic process is much affected by preconceptions formed in advance of the author's analysis of each case.

CHAPTER III

SAMPLE ANALYSES

SOURCE OF MATERIAL

IN order to make clear just how the various principles discussed in Chapter II were actually applied, two records, completely analyzed, are presented with a step-by-step explanation of the method used. *Case A* is taken from the Normal Children Group, in which validation was by clinical conference records, including data from Rorschach, TAT, interviews, etc., as listed in full above (see Chapter II). No inquiry material was obtained in this group, except for the spontaneously given labels supplied by some subjects, as in this case. The reasoning used in arriving at interpretations is indicated. The quotations from the clinical conference record relating to the interpretations are fully presented. *Case B* is from the personal interview group. The complete inquiry is quoted with explanations of how this material was used in forming the interpretations. A verbatim account of the interview section is included.

Case A: White Boy, Age 13

The following case is an example of procedure in the blind analysis of a case in the Normal Children Group. It will be recalled that in this group no inquiry was administered. The material used for validation has been more fully described above (see Chapter II). It is chiefly a summary of independent analyses by other workers using several different instruments such as TAT, Rorschach, interview, self-rating questionnaires, etc.

Below we present the analyses that were made, the rationale for the analyses, direct quotations (from the validating material)

of such statements as seem to be pertinent and the scoring category into which the interpretation was placed. It is important to keep in mind the fact that no verbal associations were available in analyzing this record.

SYMBOL I (Fig. 12).

Analysis:

Although without inquiry it is difficult to tell exactly what the effect connected with the drawing might be, it is assumed that the sun is probably a source of warmth and at the same time, a distant object so far as the subject is concerned.

Two interpretations were formed here:

A. Mother fixated.

B. But the mother seems remote to subject.

Validation:

A. Mother tie largely a fixation. (TAT)

B. . . . Marked by not over-affectionate protection.

Early lack of contact with mother. (TAT)

Uncertain of mother. (Rorschach)

Scoring:

Since the above quotations from the validation material seem to be practically a paraphrase of what was stated in the blind analysis of the drawing material, both IA and IB were scored plus.

SYMBOL II (Fig. 13).

Analysis:

It seems to be a safe guess that the attitude toward a "lollypop" suggested a positive approach. The oral element seemed obvious, too. For these reasons the following analysis was made:

A. Oral fixation.

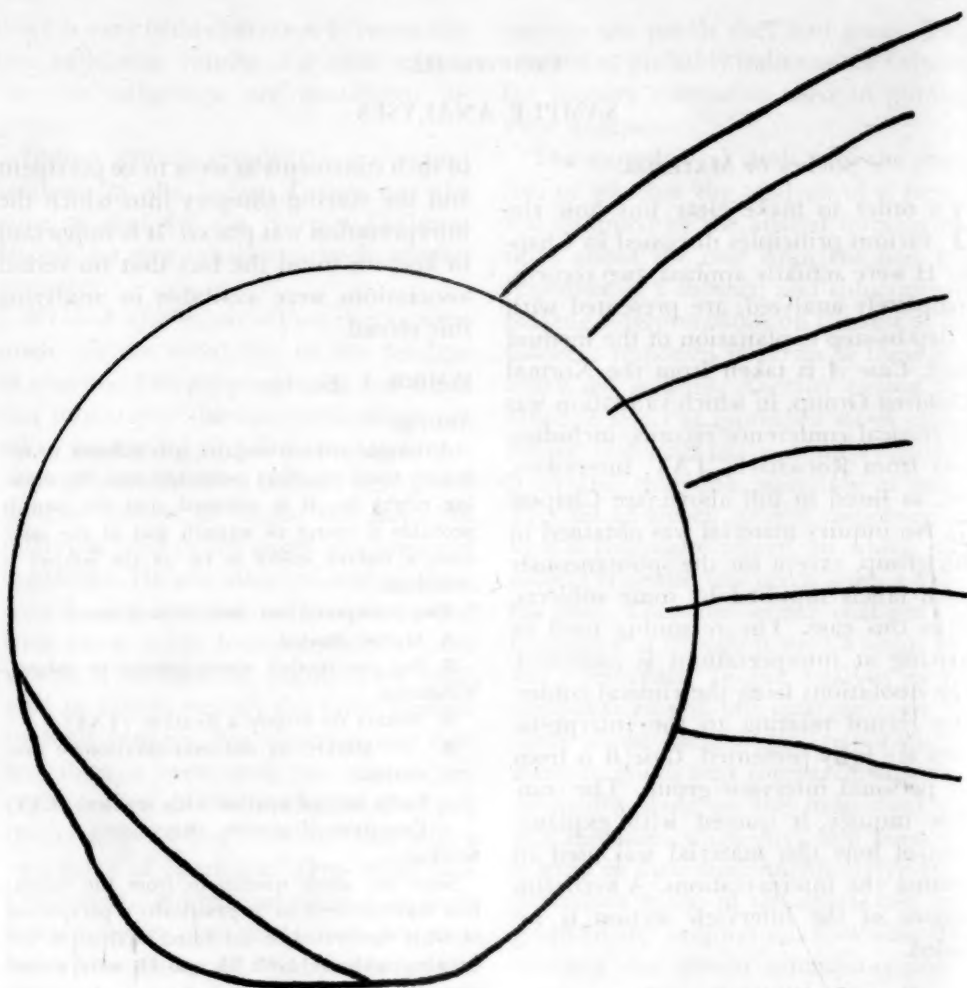
B. Positive attitude in individual heterosexual situation.

Validation:

A. Mother dependence and unfulfilled suc-
currence needs. (Rorschach)

B. Positive interest in heterosexual situation.
(Rorschach)

Sexual interests that are developing. (TAT)



sun

FIG. 12. Case A: Symbol I.

Scoring:

"Unfulfilled succorance"¹ seems to imply early deprivation in the context of mother dependency. For this reason it was felt that the statement from the validation material supported the likelihood of an oral fixation in this subject, although it hardly proved the matter. A "partial-plus" was the scoring used here.

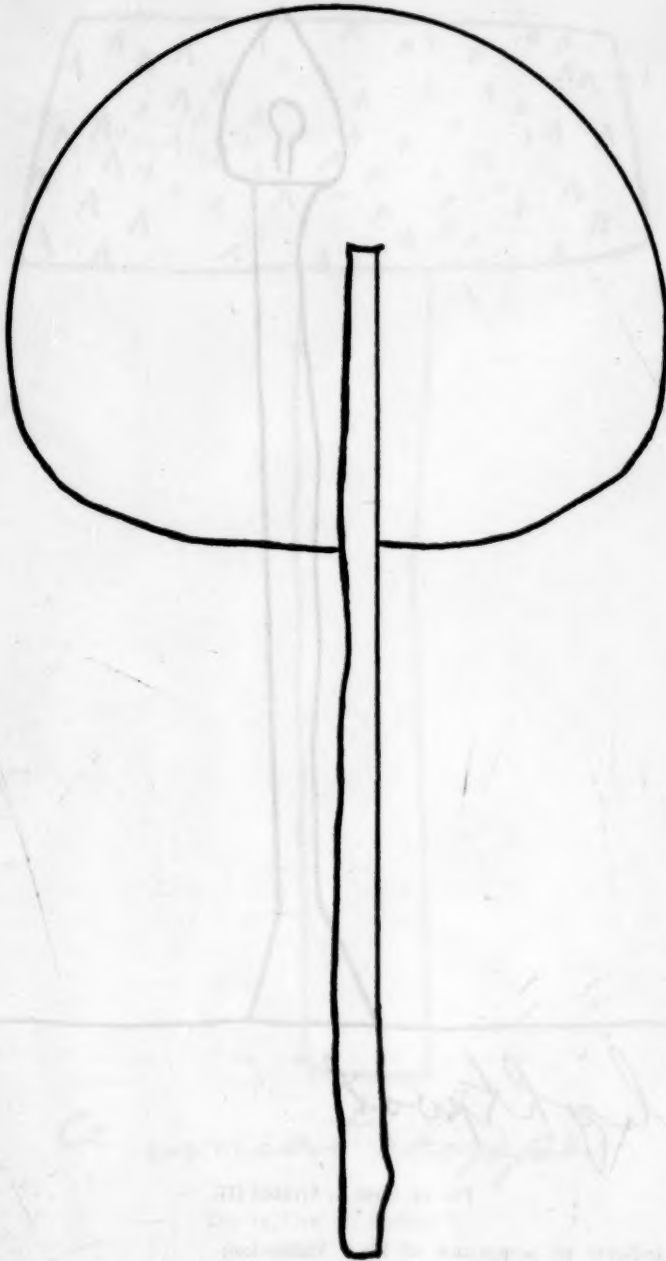
¹Term used in clinical conference to describe desire for passive role in which needs are supplied by an outside source.

The hypothesis that there was a positive attitude toward heterosexual situations seemed fully supported by the validation material, and the scoring for this hypothesis was plus.

SYMBOL III. (Fig. 14).

Analysis:

The fact that the subject drew a good figure out of the symbol without changing its essential



Lolypops

FIG. 13. Case A: Symbol II.

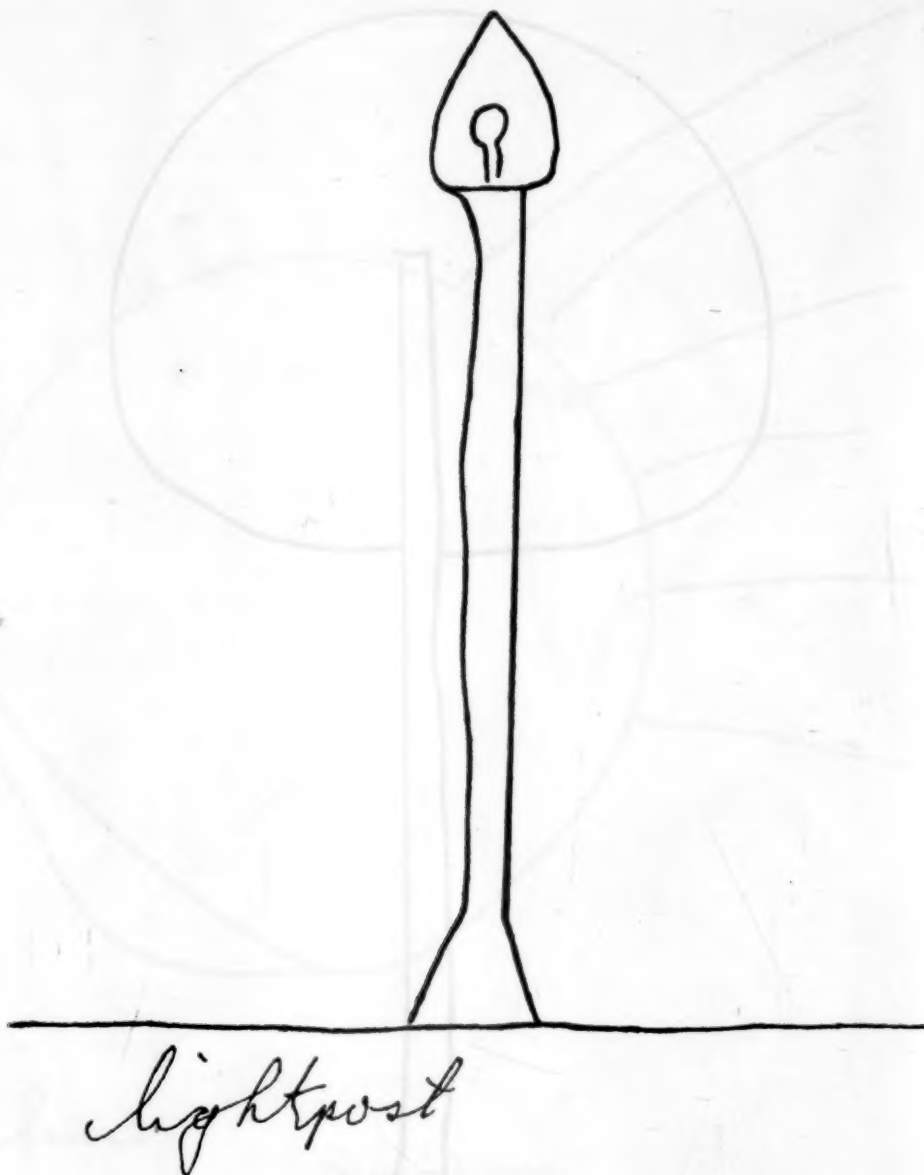


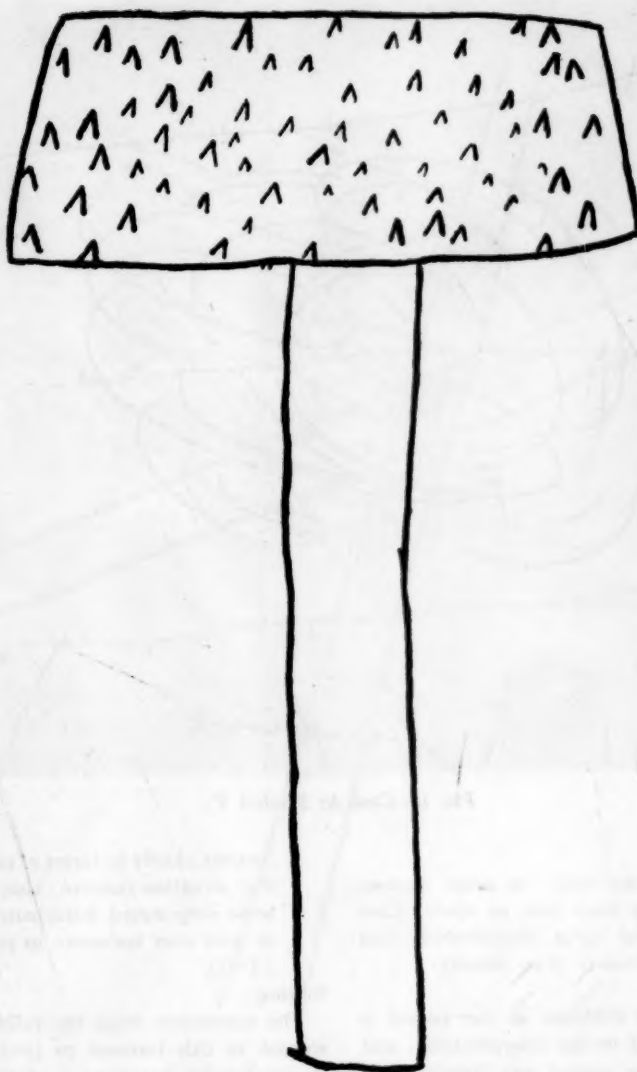
FIG. 14. Case A: Symbol III.

form seemed to indicate an acceptance of his father's masculinity on a positive basis. The fact that a lightpost was chosen would seem to indicate that the boy tried to associate guidance with the father figure. The analysis was written up as follows:

- A. Tries to identify with father.
- B. Father is the source of standards.

Validation:

- A. Father first person mentioned on list of "people I'd like to be like."
Strives to identify with father. (TAT)
- B. Father source of strict, uncompromising moral code to which subject shows resistance but probably will internalize. (Rorschach)



a meat chopper

FIG. 15. Case A: Symbol IV.

Father man of firm demands which subject tries to obey. (TAT)

Scoring:

It seems entirely justified to assume that the validating statement completely corroborated the hypothesis. The scoring therefore was plus for both statements.

SYMBOL IV (Fig. 15).

Analysis:

It seems likely that the control of sexual anxiety is somehow connected with display of force. The following analysis was made.

A. Sexual anxiety controlled through display of force.

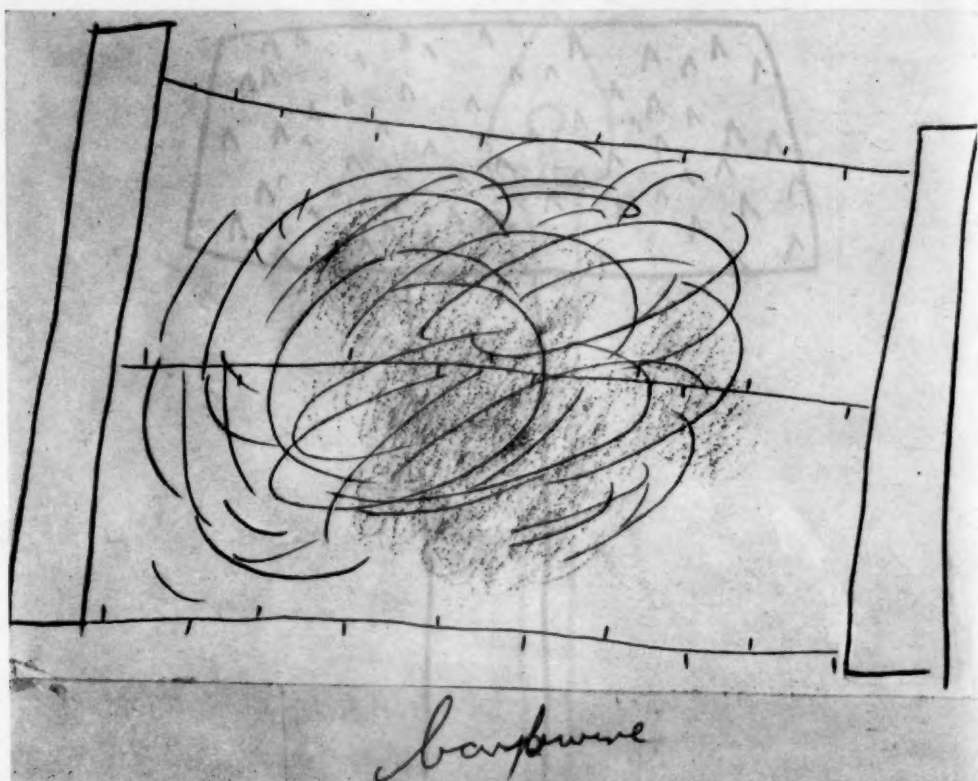


FIG. 16. Case A: Symbol V.

Validation:

- A. Sent anonymous notes to older woman demanding she meet him in shack. (Case history) Insisted upon identification that no harm was meant. (Case history)

Scoring:

Because the only evidence in the record is but remotely related to the interpretation, and it is conflictual, the scoring was "partial-plus-minus ($P\pm$)."

SYMBOL V (FIG. 16).**Analysis:**

It did not seem far-fetched to assume that a barbed wire fence is connected with environmental restriction. Analysis was written as follows:

- A. Much anxiety concerning environmental restrictions.

Validation:

- A. First and foremost, subject struggled with emotional problem of dependence and independence. (Rorschach)

Anxiety chiefly in terms of negativism, more the situation-reactive kind, rather than some deep-seated disturbance . . . is source of guilt over resistance to parental control. (TAT)

Scoring:

The quotations from the validation material seemed in this instance to justify a full plus scoring for the hypothetical analysis.

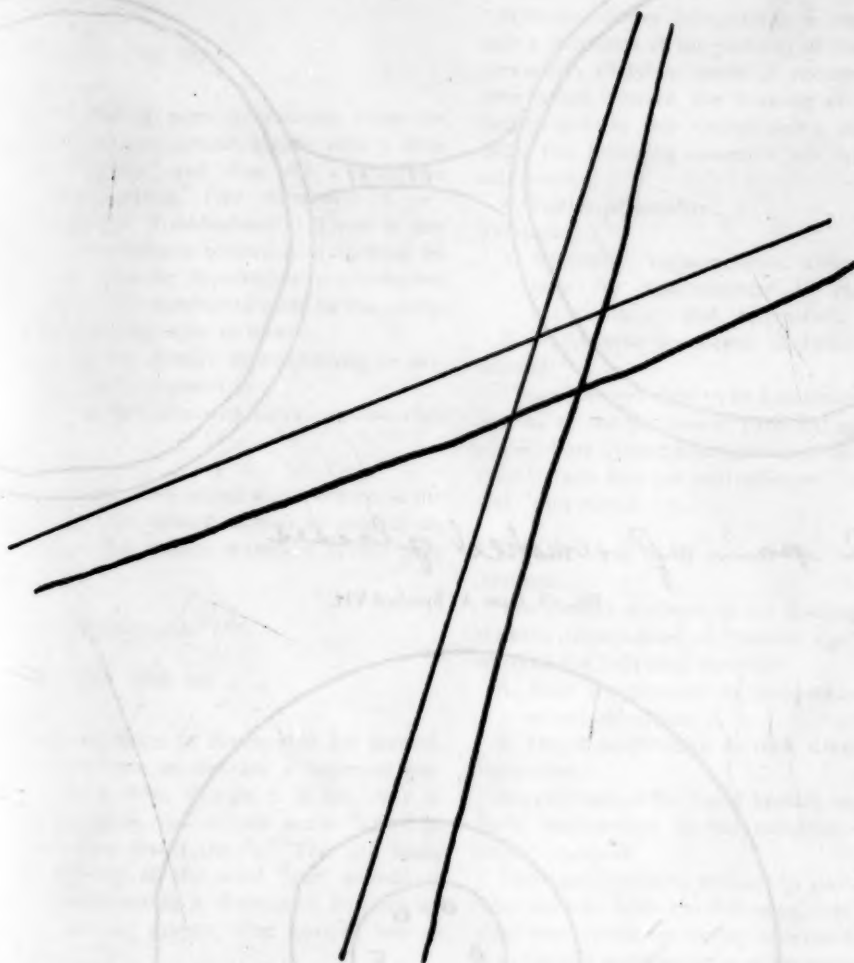
SYMBOL VI (Fig. 17).**Analysis:**

The only thing of which one can be sure, and then only relatively so, in this case, is that there is a transitory quality expressed in the drawing. For this reason, the following analysis was made:

- A. Finds only transitory contact and no deep relations possible with other boys.

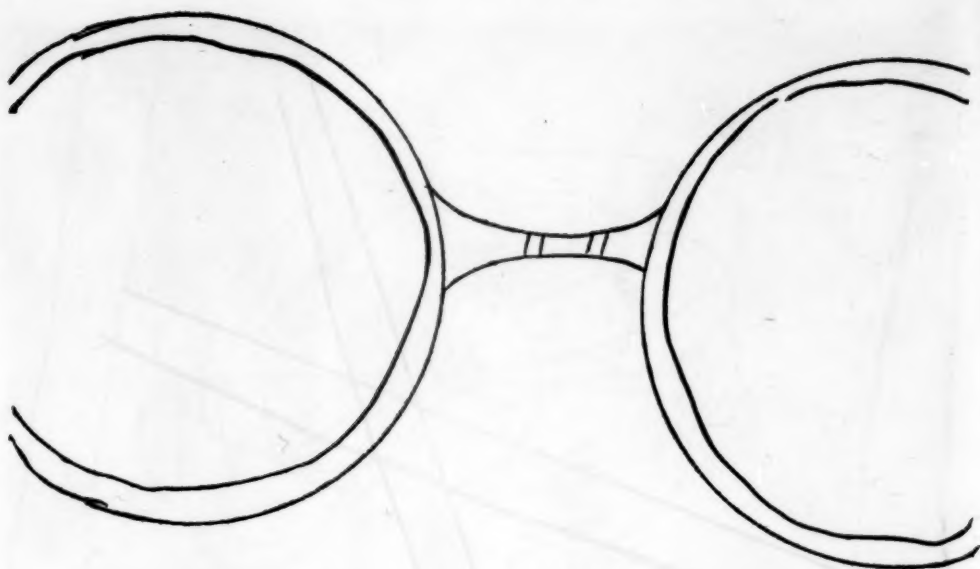
Validation:

- A. Negative feeling of group toward him . . . he makes aggressive attempts to join groups. (Sociometric analysis)



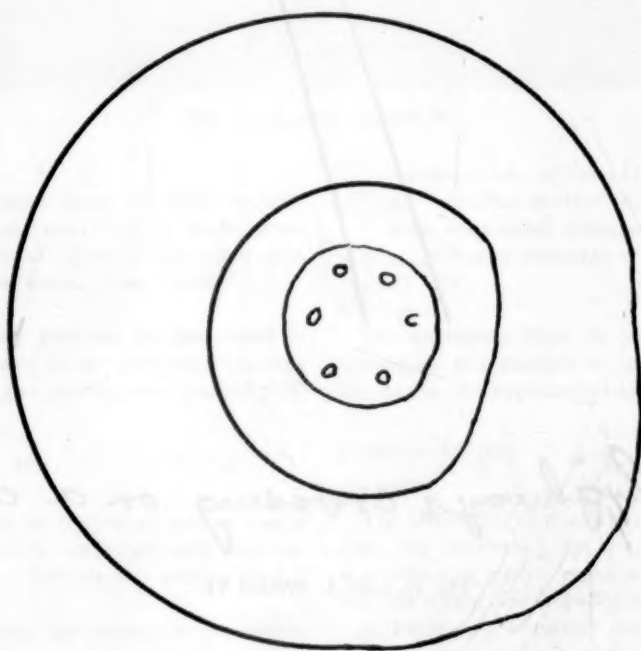
two highways crossing on a angle

FIG. 17. Case A: Symbol VI.



a pair of rimmed glasses

FIG. 18. Case A: Symbol VII.



a car wheel and tire

FIG. 19. Case A: Symbol VIII.

Scoring:

The evidence in this case seem to warrant a full plus scoring.

SYMBOL VII (Fig. 18).

Analysis:

Without having more information from the subject, one might connect glasses with a wish for "better vision," and thus with a desire for better understanding. (We often say: "I see" when we mean: "I understand".) There is also a need for shielding or protection symbolized by glasses, and thus we hypothecate a withdrawal reaction too. The statements made in the analysis of this drawing were as follows:

- A. Striving for greater understanding in orientation to opposite sex.
- B. Also has defensive withdrawal reaction with girls.

Validation:

No statements were found which related to the subject's attitude toward women in general or, particularly, the female members of his peer group.

Scoring:

The scoring here was "O."

SYMBOL VIII (Fig. 19).

Analysis:

Closing the figure in this symbol has seemed, in our experience, to indicate a regressive personality trend. Also, though it is not clear in the reproduction, the subject wrote "care" at first, and then erased the "e." The slip made in the spelling of the word "car" seemed to justify hypothecating a dependent attitude on the part of the subject. The analysis was as follows:

- A. Regressive and dependent.

Validation:

- A. Strong childlike emotional dependency. (Rorschach)

Scoring:

The quotation from the validation material seemed to furnish corroboration of the interpretation. The scoring was "plus."

SYMBOL IX (Fig. 20).

Analysis:

From this drawing, even though it was labeled as it was, no analysis seemed possible without further information, except as a complete guess. Therefore, no analysis was attempted.

SYMBOL X (Fig. 21).

Analysis:

Without further information, it seemed that only a statement of the passivity of the subject's personality could be made. A relationship has been noted between the drawing of vessels of various sorts on this symbol, and a passive attitude. The following statement was made about this symbol:

- A. Passive personality.

Validation:

- A. Aggressive, argumentative, although peers feels his aggressiveness is inconsistent. (Case history and sociometric material)
- B. Emotionally dependent. (Rorschach)

Scoring:

There does not seem to be a statement directly bearing on the question of passivity, and so both of the above quoted statements must be accepted, even though they are contradictory. The scoring was "plus-minus (\pm)."

SYMBOL XI (Fig. 22).

Analysis:

The general crudeness of the drawing plus the resistive implications of "crossed legs" seem to warrant the following analysis:

- A. Feels incompetent in competitive heterosexual situations.
- B. Feigns indifference to such situations.

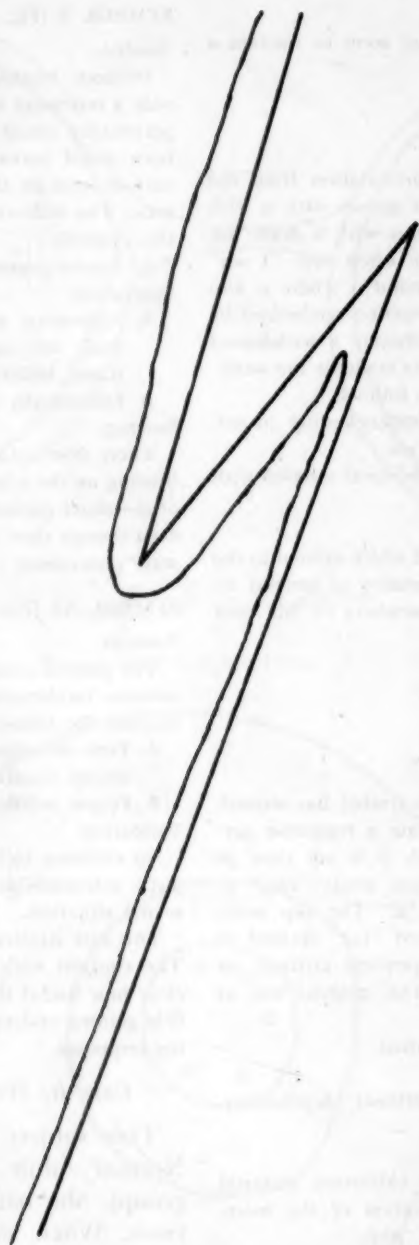
Validation:

No evidence to be found bearing on the subject's relationships in the competitive heterosexual situation.

This case illustrates analysis by content alone. The contrast with the following case makes it clear how useful the verbal association material is in gaining understanding of the subject's drawing responses.

Case B: White Female, Age 24

This subject was a member of the Normal Adult Subgroup B (interview group). She had been married for five years. When she volunteered for this study, her companion stated to the writer, "You now have in your group that rare thing, a really model wife." It might also be added that she was a person of very superior intelligence, a leader-type who had proved her ability in a



the path of a river.

FIG. 20. Case A: Symbol IX.

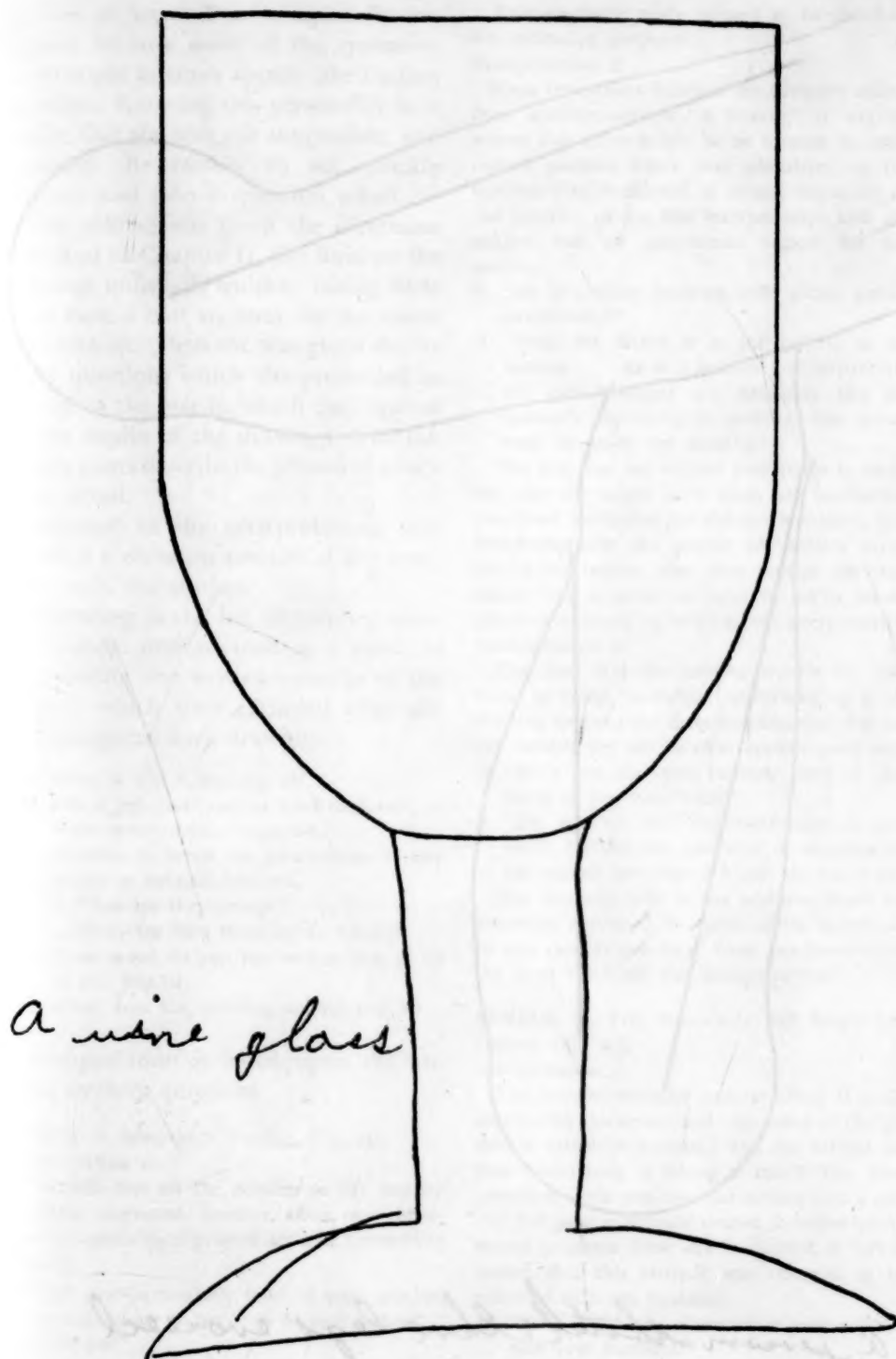
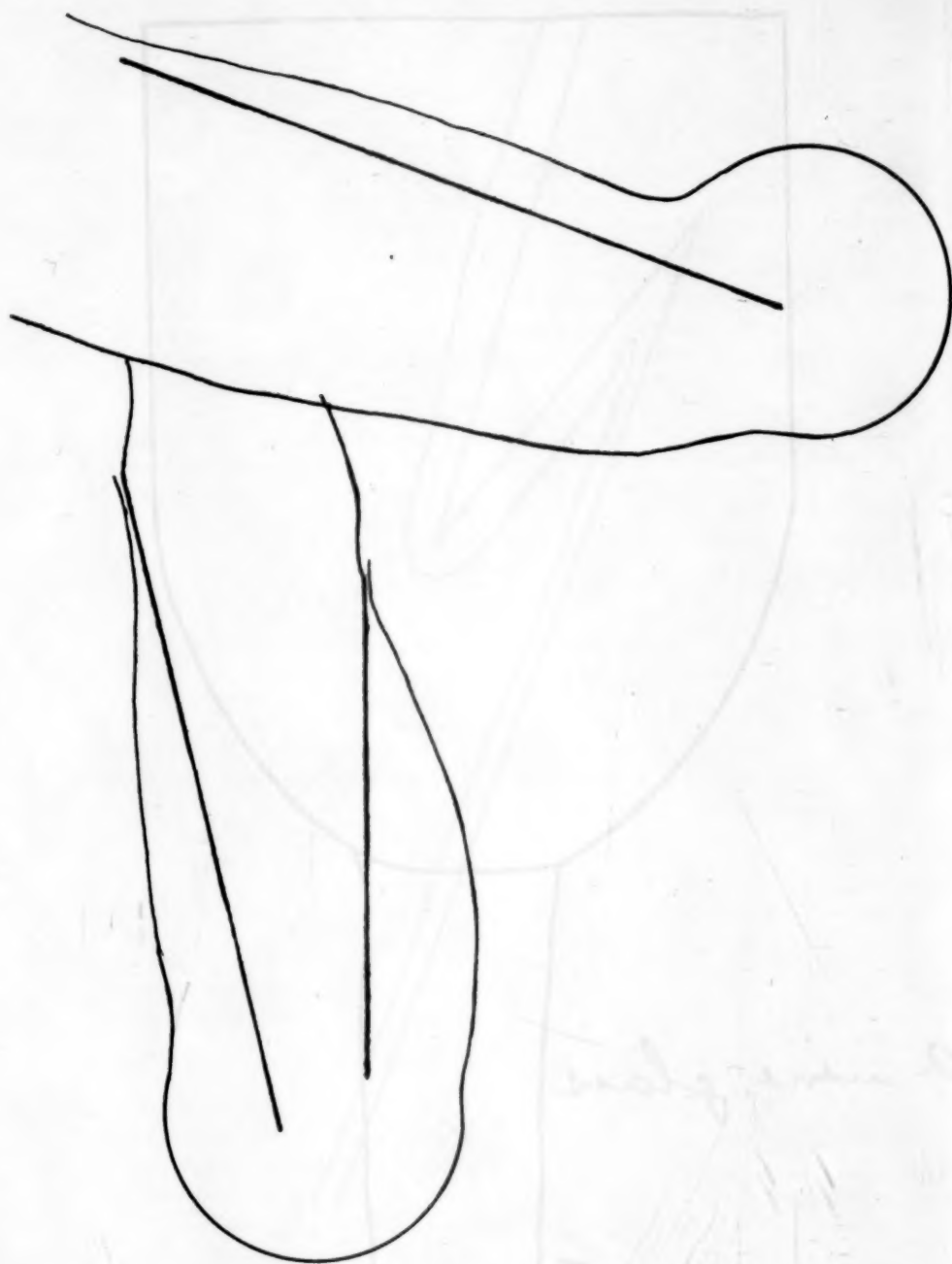


FIG. 21. Case A: Symbol X.



A person with three legs evoked.

FIG. 22. Case A: Symbol XI.

number of ways. This is especially important because some of the questions asked might at times appear like leading questions. Knowing this personality is to realize that she was not suggestible, and possessed the facility to see quickly through and into a question asked.

The subject was given the directions described in Chapter II. She finished the drawings unusually quickly, taking little more than a half an hour for the entire performance. Then she was given the inquiry questions which she proceeded to fill out in the way in which they appear on the copies of the drawings. The following pages describe the process of analysis in detail.

Included in the interpretations that follow is a verbatim account of the interview with the subject.

Following is the list of inquiry questions; these may be used as a guide in interpreting the written remarks of the subject, which were recorded after she had completed each drawing.

- A. What is this a drawing of?
- B. Was it relatively easy or hard to draw?
- C. What mood does it represent?
- D. Describe in detail the personalities of any people or animals depicted:
 1. What are they doing?
 2. What are they thinking or feeling?
- E. What mood do you feel as you look at it?
- F. Do you like it?
- G. What does the drawing remind you of?

Interpretation is based upon the answers to these questions.

SYMBOL I. Semi-circle Pattern (Fig. 23).

Interpretation 1:

The fact that all the answers to the inquiry questions expressed positive affect was interpreted as meaning a positive attitude toward the mother.

Q. "Are you particularly fond of your mother, perhaps closer to her than to your father?"

A. "Oh, yes!"

This emphatic reply seemed to be sufficient for validation purposes.

Interpretation 2:

Since the subject labelled the structure drawn from stimulus-pattern "A library," it was assumed that there might be an interest in intellectual pursuits which was stimulated by the mother. This likelihood, of course, depended on the accuracy of the first interpretation that the subject had an affectionate regard for her mother.

Q. "Do you share interests with either parent particularly?"

A. "Well. My father is as intellectual as my mother . . . he is a teacher and writer, but my own interests are definitely like my mother's, especially in politics. She always used to guide my reading."

The fact that the subject took pains to establish that she might have taken her intellectual cues from her father but did not is evident. It is interesting that she placed her answer in an intellectual context also, even though the questioner had expected to have to ask a second question in order to validate her interpretation.

Interpretation 3:

The fact that the subject reports her own mood as being "nostalgia" when looking at the drawing suggests the interpretation that she and her mother are not as close as they once were.

Q. "Have you and your mother been as close lately as you once were?"

A. "Oh, no. We still live next door to each other, but for the past year or so—since she has opened her shop—I hardly see her at all."

The subject's tone as she said the above was somewhat depressed, it seemed to the questioner. In any case, it was clear from her answer that the facts validated the interpretation.

SYMBOL II. The Semi-circle and Single Line Pattern (Fig. 24).

Interpretation 1:

The inquiry indicates positive affect. It is also noteworthy, however, that the mood of the picture is called "relaxation," and the subject says that "everything is taking it easy." The interpretation made was that the subject had a positive but passive attitude toward intimate heterosexual relations. Since she is married, it was assumed that this attitude was reflected in her relations with her husband.

Q. "How would you characterize your relations with your husband?"

1. A public building.
2. Easy.
3. Exhilaration.
4. No particular personality.
5. Nostalgia.
6. Yes.
7. A library.

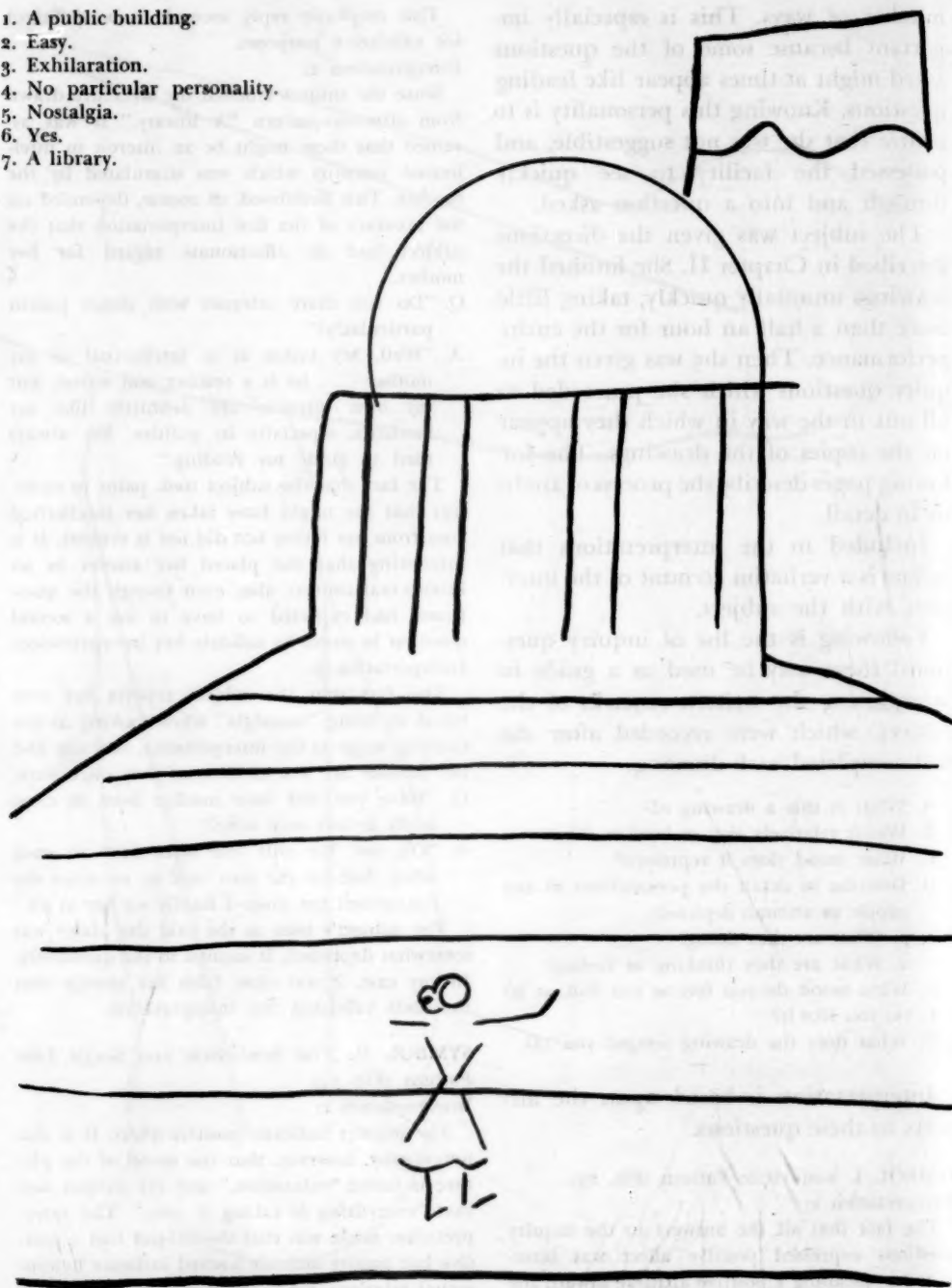


FIG. 23. Case B: Symbol I.

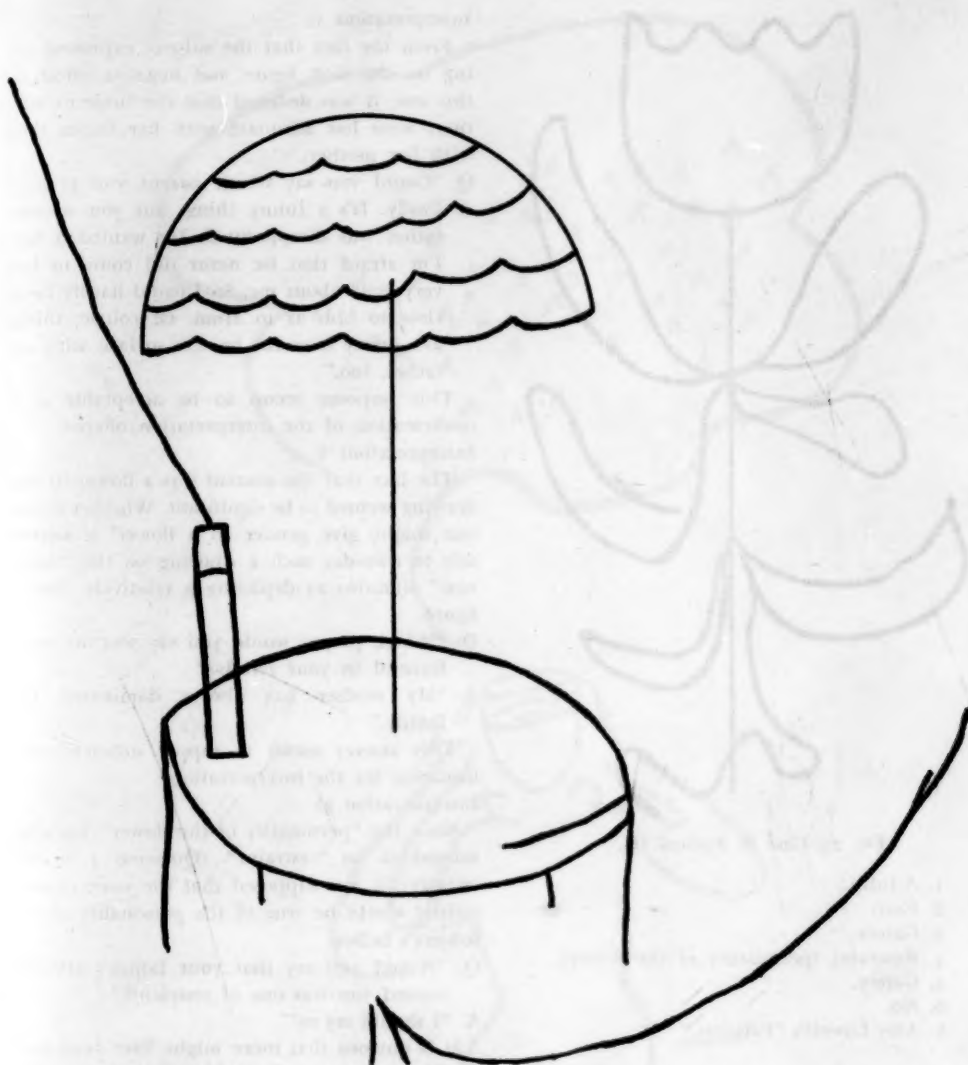


FIG. 24. Case B: Symbol II.

1. A terrace.
2. Easy.
3. Relaxation.
4. Everything is taking it easy.
5. Solitude.
6. Very much.
7. Summertime.

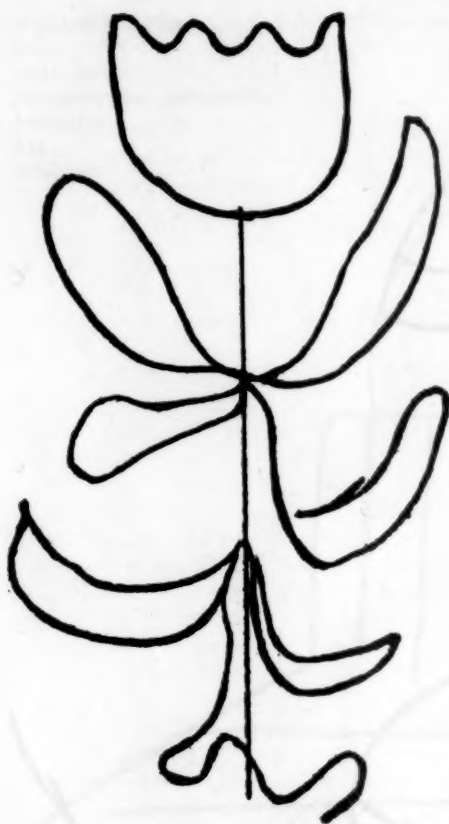


FIG. 25. Case B: Symbol III.

1. A tulip.
2. Easy.
3. Gaiety.
4. Restraint (personality of the flower).
5. Gaiety.
6. No.
7. Amy Lowell's "Patterns."

A. "Oh, very pleasant."

At this point it seemed that a more direct form of question could not be avoided.

Q. "Your relations with your husband are satisfying, but more characterized by a feeling of tenderness perhaps rather than 'purple passion'?"

Q. "Yes. How did you get that?"

A. "The object of this research is to test whether this kind of material can be used in this way."

SYMBOL III. The Single Straight Line Pattern (Fig. 25).

Interpretation 1:

From the fact that the subject expressed liking on the first figure and negative affect on this one, it was deduced that the subject's relations were less adequate with her father than with her mother.

Q. "Could you say which parent you prefer?"

A. Easily. It's a funny thing, but you see—my father was disappointed. He wanted a boy. I'm afraid that he never did come to feel very good about me. So I could hardly be as close to him as to Mom. Of course, things are pretty cheerful on the surface with my father, too."

This response seems to be acceptable as a confirmation of the interpretation offered.

Interpretation 2:

The fact that the content was a flower in this drawing seemed to be significant. Whether or not one might give gender to a flower³ it seemed safe to consider such a drawing on the "maleness" stimulus as depicting a relatively "weak" figure.

Q. "Which parent would you say was the more forceful in your family?"

A. "My mother has always dominated the family."

This answer seems to supply sufficient confirmation for the interpretation.

Interpretation 3:

Since the "personality of the flower" was considered to be "restraint" (Question 4 on the inquiry), it was supposed that the same characteristic would be true of the personality of the subject's father.

Q. "Would you say that your father's attitude toward you was one of restraint?"

A. "I should say so!"

It is obvious that more might have been said in this analysis, particularly with regard to the reason for the mood of gaiety and the poem mentioned in Question 7 in the inquiry. However, as has been explained above, no more than three hypotheses were made apropos of any one symbol. Possible connections with husband were not discussed.

SYMBOL IV. The Inverted "V" Pattern (Fig. 26).

Interpretation 1:

Since all the associations on the inquiry seem

³In the vernacular of the street, a passive male homosexual is referred to as a "pansy."



FIG. 26. Case B: Symbol IV.

1. Woman nursing a headache.
2. Hard.
3. Torment.
4. She is wearied with nursing grudges and occupies her time with trading neighborly pettinesses.
5. Anguish.
6. No.
7. My mother-in-law.

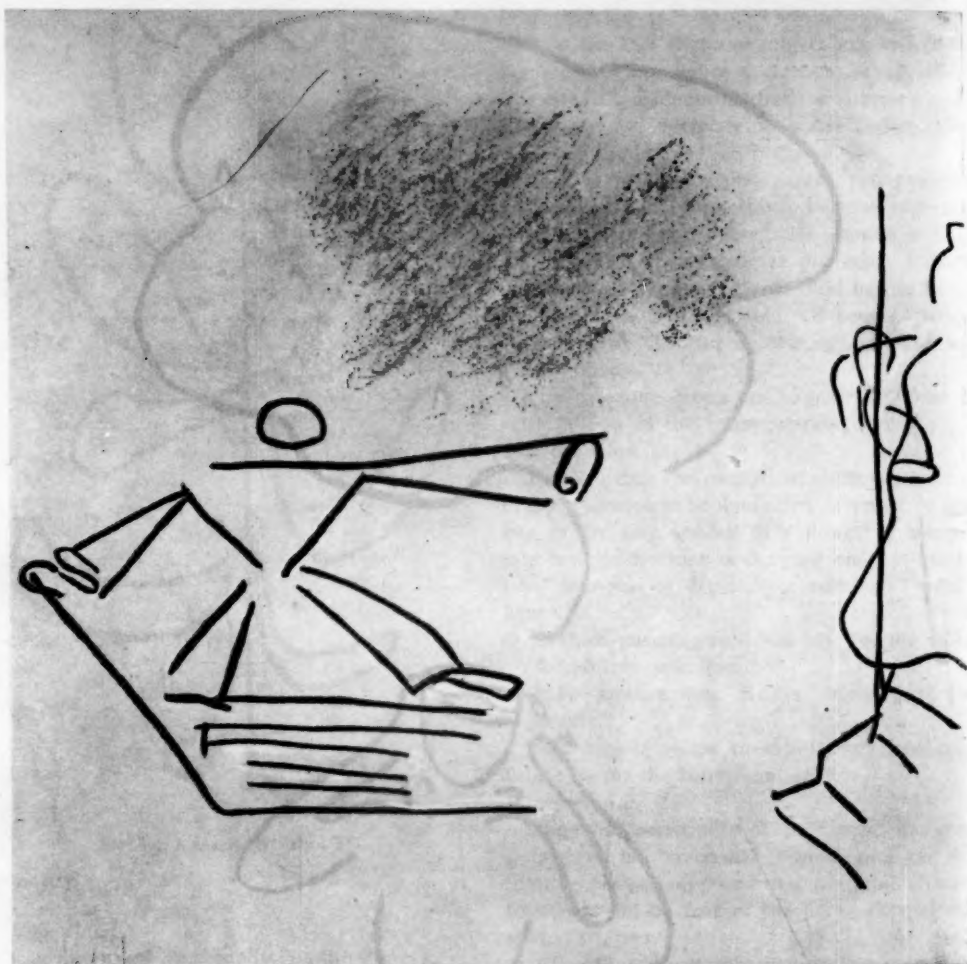


FIG. 27. Case B: Symbol V.

1. A tornado.
2. Easy.
3. Fear.
4. The man, like Per Hansen, is a stocky, broad-shouldered man; the woman is a stocky broad—he is concerned about getting his family to safety; she is wondering which of the household goods she should trundle along.
5. Determination.
6. Yes.
7. Kansas.

to refer to the subject's mother-in-law in a negative manner, it was assumed that there must have been conflict which affected the subject's sexual adjustment. The reaction to the symbol for sexual anxiety is not always interpreted in reference to intimate heterosexual relations. In this case, this seems to be the most likely interpretation.

Q. "You seemed somewhat wistful when you agreed that 'purple passion' does not characterize your relationship with your husband. To what do you attribute its absence?"

A. "I don't know . . . I guess the story-book phase of our honeymoon is over."

Q. "How has it changed?"

A. "Well, sometimes . . . I don't know, I get the

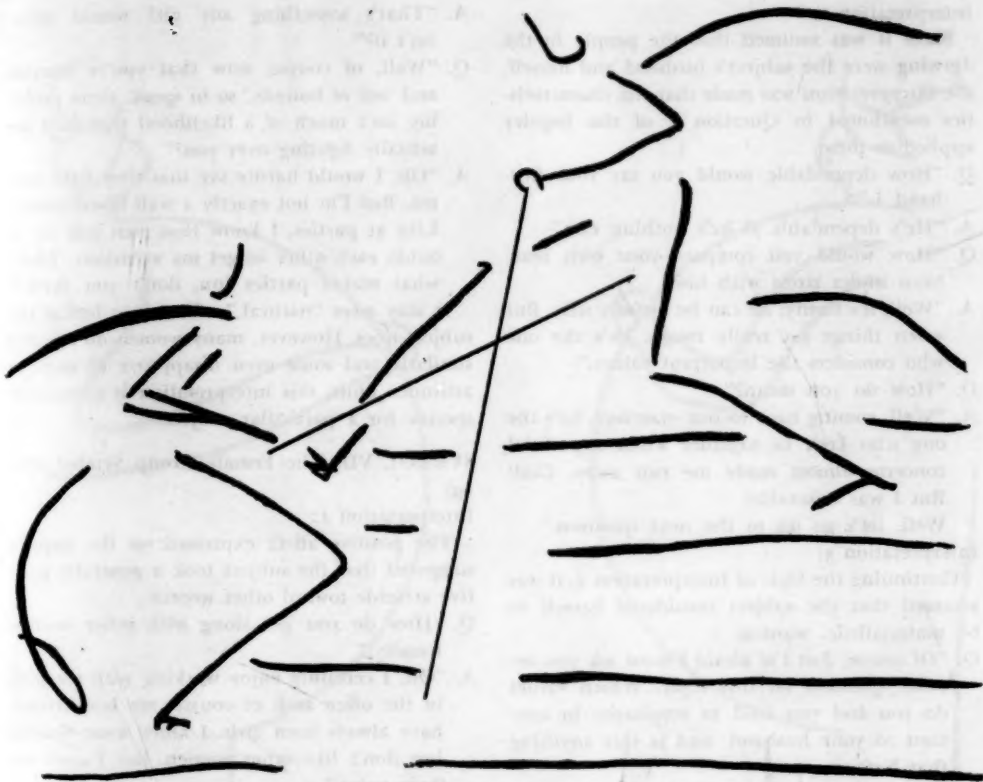


FIG. 28. Case B: Symbol VI.

SYMBOL NO. 6. THE CROSSLINES PATTERN

1. Two fencers.
2. Easy.
3. Romance.
4. Stock characters out of a Basil Rathbone movie.
5. Excitement.
6. Yes.
7. The Beggars Opera.

feeling that he isn't all mine. *You'll* probably eat this up, but sometimes I feel there's too much mother-in-law. Now, don't get me wrong, I do like her. I mean she's all right—you know? It's just that she can't let him alone. Sometimes I think he's more tied to her than to me. I'm trying to change that, but he is having a hard time adjusting to being the loser. Oh, well, what else do you want to ask me?"

SYMBOL V. The Diffuse Mass Pattern (Fig. 27).

Interpretation 1:

The combination of the attitude of "deter-

mination" with the scene of strife suggested, in the context of the reactions previously ascribed to the man and to the woman, that the subject was determined to seek relief from the anxiety created by marital conflict.

Q. "Have you had serious concern for the future of your marriage, I mean, really, for a period of time?"

A. "Yes, when my husband returned from service I was quite sure that I could not change the plans that I had made to suit some of his new ideas. I don't know how he put up with me then. I used to pout all day long. However, there isn't any doubt about our staying together now."

Interpretation 2:

Since it was assumed that the people in the drawing were the subject's husband and herself, the interpretation was made that the characteristics mentioned in Question 4 of the inquiry applied to them.

Q. "How dependable would you say your husband is?"

A. "He's dependable if he's nothing else."

Q. "How would you compare your own reactions under stress with his?"

A. "Well, it's funny; he can be awfully silly. But when things get really tough, he's the one who considers the important values."

Q. "How do you mean?"

A. "Well, coming back to our marriage, he's the one who kept us together when superficial concerns almost made me run away. God! But I was miserable!

Well, let's go on to the next question."

Interpretation 3:

Continuing the logic of Interpretation 2, it was assumed that the subject considered herself to be materialistic, wanton.

Q. "Of course. But I'm afraid I must ask you another question on this topic. Which values do you feel you tend to emphasize in contrast to your husband, and is this anything that bothers you?"

A. "Well, he's not materialistic like I am. I need pretty things, for example, but he doesn't understand it. It still worries me at times but what can I do about it? He's right, I suppose, but I'm the way I am."

Q. "Sometimes you fear you are very materialistic and—um—somewhat wanton?"

A. "Yes, I'm afraid so. There isn't much doubt about that."

The last interpretation, although accepted by the subject, was not suggested to her in a way which gave her much freedom for discussion. It was considered to be only a "partial-plus" validation. However, the importance of her feeling that she tended to be materialistic in an anxiety-provoking situation is clearly confirmed.

SYMBOL VI. The Male Group Symbol (Fig. 28). Interpretation 1:

It seems practically a paraphrase rather than an interpretation of the inquiry statements to say that the subject sees men in terms of romance and excitement, particularly in terms of conflict over her.

Q. "How do you feel about the idea of men fighting over you?"

A. "That's something any girl would enjoy, isn't it?"

Q. "Well, of course, now that you're married and 'out of bounds,' so to speak, there probably isn't much of a likelihood that men are actually fighting over you?"

A. "Oh, I would hardly say that they fight over me. But I'm not exactly a wall-flower either. Like at parties, I know that men still try to outdo each other to get my attention. That's what makes parties fun, don't you think?"

It may seem "natural," offhand, to feel as the subject does. However, many women do not feel similarly and some even disapprove of such an attitude. Thus, this interpretation is adequately specific for a particular subject.

SYMBOL VII. The Female Group Symbol (Fig. 29).

Interpretation 1:

The positive affect expressed on the inquiry suggested that the subject took a generally positive attitude toward other women.

Q. "How do you get along with other women usually?"

A. "Oh, I certainly enjoy working with the girls in the office and, of course, my best friends have always been girls. I know some women just don't like other women, but I can't see their point."

Interpretation 2:

The characterization in Question 4 of the inquiry suggested that the subject had a tendency to feel superior to most women, her positive attitude notwithstanding.

Q. "What do you think about women as a group, I mean in the sense of their being alert, and so forth?"

A. "It isn't that men are really superior, but most women get pretty stodgy—in a pleasant sort of way. But that's not because they *couldn't* be otherwise. I certainly wouldn't let myself go the way some woman can, and seem to enjoy it."

Interpretation 3:

The fact that the description in Question 4 of the inquiry seems to set the subject apart from the rest of the female group lent itself further to the interpretation that the subject had a resistance to pregnancy based on her unwillingness to identify with the female group.

Q. "How do you feel about having children?"

A. "Oh, I'm strictly a career-girl type, I'm afraid: No part of housewifery appeals to me. This 'babies and bridge-game' life most of



FIG. 29. Case B: Symbol VII.

1. Two pregnant women.
2. Easy.
3. Placidity.
4. Naive rather conventional women, fastidious enough to keep their skirt hems even despite their figure, very happy to do just as Jesus tells them to.
5. Happiness.
6. Yes.
7. Helen Hokinson.

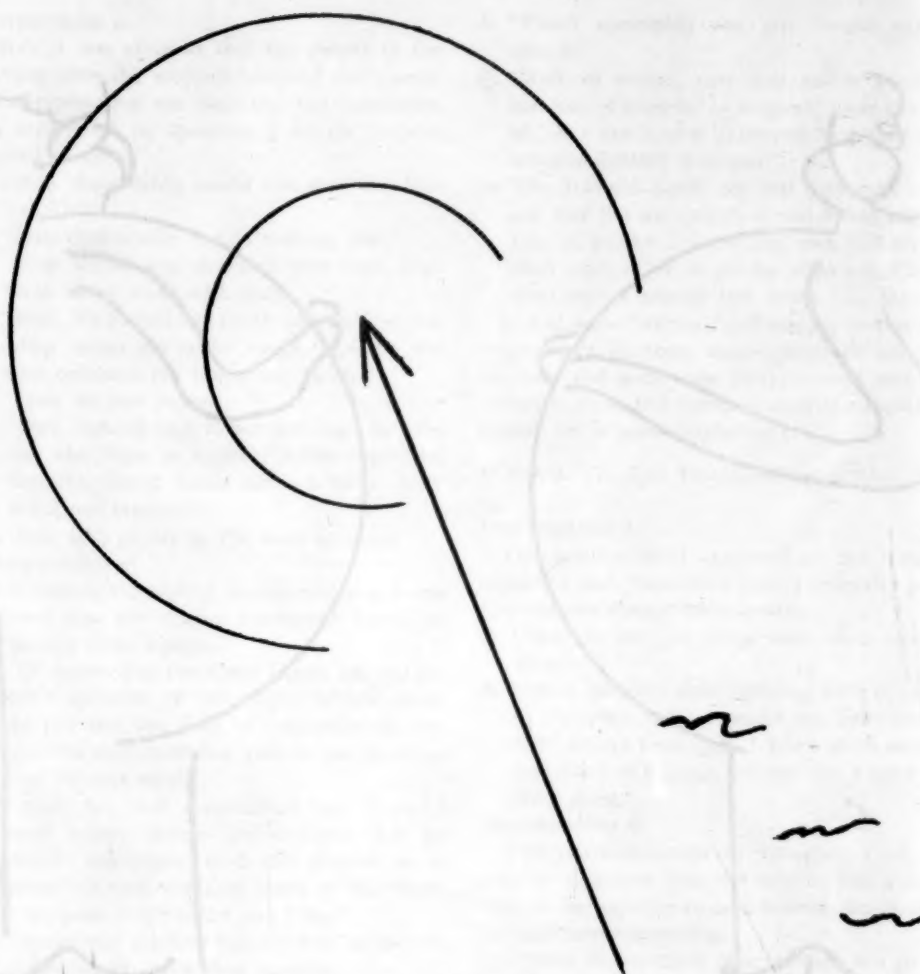


FIG. 30. Case B: Symbol VIII.

1. A bulls-eye.
2. Easy.
3. Achievement.
4. None.
5. Triumph.
6. Yes.
7. A round peg in a round hole.

my girl friends have compromised on is not for me. And the way some men like to tie their women down with babies! I'll have a baby when the man can do the suffering for me."

SYMBOL VIII. The Regression Symbol (Fig. 30).

Interpretation 1:

The fact that return to the inner circle is

characterized as being a source of triumph, and is associated with reaching a goal in the inquiry, seemed to indicate that the subject is very much security-conscious.

Q. "How important is security to you?"

A. "As a matter of fact, I've turned down a couple of agency offers quite recently, even though they would pay so much better, because I prefer staying at S—where I know



FIG. 31. Case B: Symbol IX.

1. Man walking, with a cane.
2. Hard.
3. Doggedness.
4. A man of taste, set in his own ways, indifferent to criticism, loving cities.
5. Stubbornness.
6. No.
7. A map

exactly what my future will be. I guess that answers your question."

This is particularly interesting since it has been learned that the subject's husband is employed as an engineer in what seems to be a relatively substantial position.

SYMBOL IX. Aggression Symbol (Fig. 31).

Interpretation 1:

The fact that the stimulus-pattern was well structured was interpreted to mean that the subject does not express hostility explosively.

Q. "Are you considered to be a person with very much of a temper?"

A. "No I don't think that there is anything to be gained from outbursts."

The problem of ego-involvement might seem worthy of consideration in evaluating the last response. However, people who are quick to anger are often as proud of their spontaneity as others are of self-control.

Interpretation 2:

The characterization of the figure stated in Question 4 of the inquiry was interpreted as meaning that, when this subject was confronted by pressure to conform, she reacted quietly but with confidence in pursuing her own pattern.

Q. "How do you feel when situations seem to re-

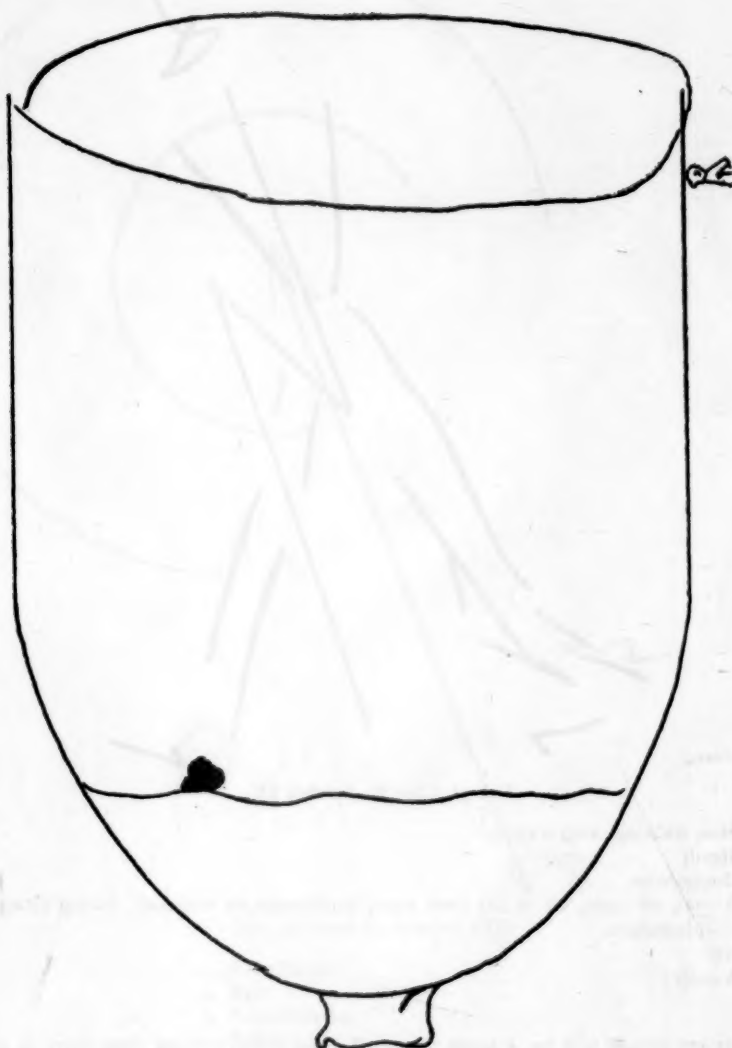


FIG. 32. Case B: Symbol X.

1. Flies around a brandy glass.
2. Easy.
3. Indifference.
4. None.
5. Hopelessness.
6. No.
7. Short-lived love affairs.

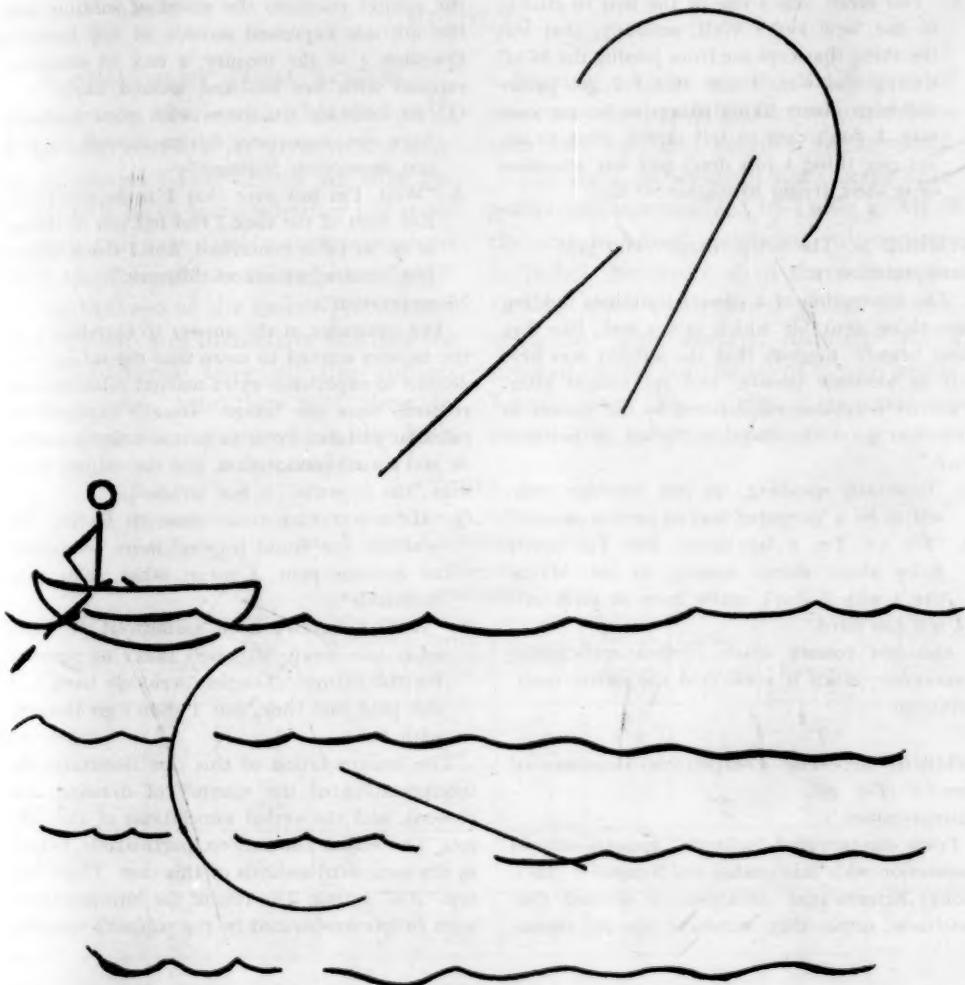


FIG. 33. Case B: Symbol XI.

1. Canoe on a moonlit lake.
2. Easy.
3. Weirdness.
4. He loves solitude, is not above rediscovering the magic usually captured on calendar pictures, will come home hungry and go to bed.
5. Pleasure.
6. Yes.
7. Cool summer nights.

quire that you change yourself to suit the desires of others?"

- A. "You mean, was I one of the first to change to the 'new look'? Well, seriously, that was the thing that kept me from joining the WAC during the war. I am afraid I get pretty stubborn about liking things to be my own way. I don't care to tell others what to do, but one thing I just don't pay any attention to is their trying to dictate to me."

SYMBOL X. The Self-Concept (Fig. 32).

Interpretation 1:

The conception of a passive container holding something desirable which others seek, like flies near brandy, suggests that the subject sees herself as someone passive, and yet sought after. Passivity is further emphasized by the answer to Question 3 on the inquiry, "mood of indifference."

- Q. "Generally speaking, do you consider yourself to be a 'go-getter' sort of person or not?"

- A. "Uh uh! I'm a lazy-Susan. But I'm pretty lucky about things coming to me. Maybe that's why I don't really have to push myself too hard."

The last remark made further questioning unnecessary since it confirmed the entire interpretation.

SYMBOL XI. The Competitive Heterosexual Symbol (Fig. 33).

Interpretation 1:

From the fact that "solitude" appears only in connection with this symbol and Symbol 2 (individual heterosexual situation), it seemed that loneliness, rather than seclusion, was the conno-

tation. (The latter was the interpretation on the basis of the inquiry in Symbol 2 alone.) Because the subject contrasts the mood of solitude with the attitude expressed outside of the home in Question 4 of the inquiry, a lack of emotional rapport with her husband seemed likely.

- Q. "In intimate situations with your husband, have you sometimes felt as though he does not share your feelings?"

- A. "Well, I'm not sure that I understand you. But most of the time I feel left out of things, as far as he is concerned. But I think that is just because we are so different."

Interpretation 2:

The substance of the answer to Question 4 on the inquiry seemed to mean that the subject had desired to experience extra-marital relations, but resisted; since the "magic" usually captured on calendar pictures seems to have a definite romantic and sexual connotation, and the subject states that "the appetite" is not satisfied.

- Q. "Have you ever come close to finding out whether you could respond more completely to another man, I mean other than your husband?"

- A. "Well, I haven't been unfaithful, if that's what you mean—although that's no promise for the future! (Laughs) Seriously though, I did plan one time, but I didn't go through with it."

The interpretation of this case illustrates the interpretation of the manner of drawing, the content, and the verbal associations of the subject. The verbal associations, particularly, helped in the successful analysis of this case. There was one "P+" rating. The rest of the interpretations were fully corroborated by the subject's remarks.

CHAPTER IV

RESULTS

A. ANALYSIS OF TOTAL RESULTS

THE results obtained in this study will be analyzed first in terms of the scoring categories. The object of this approach will be to learn whether the stimulus-patterns gave rise to interpretations which could be substantiated in a significant percentage of the cases. The second approach will aim to discover whether the stimulus-patterns were equally subject to validation. Attention will then be given to specific factors which may have

a bearing on the results: the factors of sex, emotional stability, sequence of presentation, age, and cultural background.

The data, in terms of the scoring categories, are summarized in Table 3. All of the one hundred sixty-nine subjects are included. No more than three interpretations were made on a given subject-response. The average number was a total of twelve for the set of eleven stimulus-patterns. The 2,265 interpretations of all the subjects' responses served as

TABLE 3
INTERPRETATIONS FOR THE VARIOUS STIMULUS-PATTERNS IN TERMS OF
THE RATING-CATEGORIES: ALL CASES

N = 169
Interpretations = 2,265

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "++"	Partial Corrobo- ration "p"	Contra- diction "--"	Partial Contra- diction "p--"	Conflict- ing Evidence "±"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	13 5.2	203 86.0 2.4	12 5.1 1.4	18 7.7 1.8	1 0.4 0.4	2 0.8 0.6	249	236
Semi-circle & single line	No. % SE	19 9.5	160 87.9 2.4	4 2.2 1.1	14 7.7 1.9	0	4 2.2 1.1	201	182
Straight line	No. % SE	25 10.5	182 85.4 2.4	8 3.8 1.3	19 8.9 1.8	3 1.4 0.8	1 0.5 0.5	238	213
Inverted "V's"	No. % SE	38 18.4	152 89.9 2.3	7 4.1 1.5	9 5.0 1.7	1 0.6 1.8	0	207	169
Diffuse mass	No. % SE	22 12.0	152 94.4 2.9	3 1.9 0.91	4 2.2 1.1	1 0.5 0.5	1 0.5 0.5	183	161
Crosslines	No. % SE	34 16.8	146 86.9 3.1	9 5.4 2.2	7 4.0 1.8	4 2.3 1.5	2 1.2 1.0	202	168
Counter-opposed semi-circles	No. % SE	38 20.8	131 90.3 7.4	6 4.1 1.5	8 5.5 1.9	0	0	183	145
Semi-circle within larger semi-circle	No. % SE	19 10.3	144 87.3 3.2	4 2.4 0.3	12 6.4 1.8	1 0.5 0.5	4 2.2 0.3	184	165
Jagged line	No. % SE	23 11.7	153 87.9 2.3	10 5.7 1.8	8 4.5 1.0	1 0.6 0.6	2 1.2 0.8	197	174
Incomplete "U"	No. % SE	21 9.4	178 88.6 2.2	9 4.4 1.4	11 5.5 1.6	1 0.5 0.5	2 1.1 0.7	222	201
Lines and semi- circles	No. % SE	30 15.1	144 85.7 2.7	10 5.9 1.8	12 7.1 2.0	3 1.7 0.9	0	199	169

the basis for the figures presented.

The percentage of interpretations for a given symbol which fell into each scoring category is shown. The first column contains the percentage of interpretative statements on which no evidence could be found in the validating material. The rest of the percentages were computed on the basis of the number of statements on which either supporting or negating evidence could be found. Thus it is possible to see the extent of agreement between the validating material and the interpretative statements for each symbol. From this table we can compare the relative frequency of the different scoring categories.

It is apparent on inspection of Table 3 that all the symbols offer confirmable interpretations in an overwhelming percentage of the cases. The percentages in the "plus" column range from 85.4% to 94.7%. The size of the percentages assumes further importance in the fact that the standard errors of those in the "plus" column are all less than one-thirteenth of the proportion, and in most cases equal about one thirty-fifth of the proportion. This makes the probability of finding complete agreement for interpretations based upon the subjects' responses very high.

Considering the data in terms of negative probability (see "minus" column), it appears from Table 3 that interpretations based on the straight-line (Fig. 4) pattern were most often contradicted by the validating material. Here the contradicted statements amount to 8.9%; the partially contradicted statements amount to 1.4%; and those for which there was both supporting and contradictory evidence amount to 0.5%. If we multiply the sigmas of each proportion by three and add these numbers to the

TABLE 3A
INTERPRETATIVE STATEMENTS FOR EACH
SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: ALL CASES

Scoring Categories Used for Validation	Per cent of Cases in Each Scoring Category
o	o- 44
+	50-100
P+	o- 53
±	o- 9
P±	o- 0.3
-	o- 30.7
P-	o- 11

original percentages, we have for each case the maximum percentage likely to occur in the negative results (counting the "plus-minus" group on a half basis). This computation would indicate a probable maximum of 18.98%. Thus the most extreme case of lack of support still leaves a high degree of confidence in the reliability and validity of the procedure involved in this test.

The effect of computing percentages without counting the cases in which no evidence was available is of interest to us. A glance at Table 3 indicates that the highest figure in the "No Evidence" column was 20.8%. Since this means that, even here, judgments could be rendered in 145 cases, it is evident that an adequate sample was employed.

The ranges in Table 3A initiated to show the spread of scoring categories for individual cases, invite caution. There was only one case in which 30.7% of the judgments were contradicted, the remaining statements having been wholly corroborated. It is noteworthy too that the lowest figure of plus-ratings in any one case was 50%. There was partial corroboration in 32% of the plus-rating

TABLE 4
INTERPRETATIONS IN THE VARIOUS RATING-CATEGORIES IN TERMS OF
THE STIMULUS-PATTERNS: ALL CASES

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "++"	Partial Corrobo- ration "P+"	Contra- diction "--"	Partial Contra- diction "P-"	Conflict- ing Evidence "±"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	13 4.6	203 11.6 0.8	12 14.6 3.9	18 14.8 3.2	1 6.2 6.0	2 11.2 7.0	249 11.0	236 11.9
Semi-circle & single line	No. % SE	19 6.7	160 9.2 0.7	4 4.9 2.2	14 11.5 2.9	0	4 22.2 9.7	201 8.9	182 9.2
Straight line	No. % SE	25 8.8	182 10.4 0.7	8 9.8 3.3	19 15.6 3.3	3 18.8 9.8	1 5.6 5.6	238 10.5	213 10.7
Inverted "Vs"	No. % SE	38 13.5	152 8.7 0.7	7 8.5 3.0	9 7.4 2.3	1 6.2 6.0	0	207 9.1	169 8.5
Diffuse mass	No. % SE	22 7.8	152 8.7 1.0	3 3.7 2.1	4 3.3 1.5	1 6.2 6.0	1 5.6 5.6	183 8.1	161 8.1
Crosslines	No. % SE	34 12.0	146 8.4 0.8	9 10.9 3.5	7 5.7 2.1	4 25.0 11.0	2 11.2 7.0	202 9.0	168 8.5
Counter-opposed semi-circles	No. % SE	38 13.4	131 7.5 1.0	6 7.3 2.9	8 6.6 2.3	0	0	183 8.1	145 7.3
Semi-circle within larger semi-circle	No. % SE	19 6.7	144 8.2 0.3	4 4.9 2.2	12 9.8 2.7	1 6.2 6.0	4 22.2 9.7	184 8.1	165 8.3
Jagged line	No. % SE	23 8.2	153 8.8 0.7	10 12.2 3.4	8 6.6 2.3	1 6.2 6.0	2 11.2 7.0	197 8.7	174 8.8
Incomplete "U"	No. % SE	21 7.4	178 10.2 0.7	9 10.9 3.3	11 9.0 2.6	1 6.2 6.0	2 11.2 7.0	222 9.8	201 10.1
Lines and semi- circles	No. % SE	30 10.6	144 8.2 0.6	10 12.2 3.4	12 9.8 2.7	3 18.8 9.8	0	199 8.8	169 8.5
	Total No.	282	1745	82	122	16	18	2265	1983

judgments. The highest percentage of no evidence ratings occurred in the Indian group, and in one case it was as high as 44%. The special conditions obtaining here have been described elsewhere. However, more than half the judgments could still be evaluated, even in the case of this individual.

Table 4 deals with other problems which the total data help us solve. Here the percentages have been computed so as to compare each symbol with each of the others in terms of the contribution it makes to the total number of each category. By comparing the percentage in

each column with the percentages in the last (or total) column we can see the relationship between this contribution and the percentage of interpretations indicated for each symbol.

The most striking fact which this table offers is that all the symbols are equally valid. The percentages in the "plus-column" are practically identical with those in the last. In other words, while the symbols vary slightly in the number of interpretations to which they readily lend themselves in an individual record, there is practically no difference between their likelihood to produce a given num-

ber of interpretations and the likelihood of these interpretations' being wholly substantiated. Variations exist in the other categories, but they do not affect this relationship.

Some of these variations are interesting to examine. For example, the "femaleness" pattern (Fig. 1) was the easiest pattern to relate to the validating material (i.e., had the lowest per cent in the "O" or "no evidence" column). This is probably a corollary of the degree of attention given the "femaleness" pattern (Fig. 1) by most of the intensive studies of individual behavior. The percentage of "no evidence" ratings for the "maleness" pattern (Fig. 4), was practically double that for the "femaleness" pattern (Fig. 1).

The most difficult symbols to validate in our study were those purporting to deal with "maleness" (Fig. 4), "femaleness" (Fig. 1), competitive heterosexuality (Fig. 7), and sexual anxiety (Fig. 10). The highest figure in the "no evidence" column on any symbol was 13.5%, and the lowest number of judgments on any symbol turned out to be 145. This is, of course, large enough to provide a reliable basis for conclusions.

The reason that these patterns appear to refer to more obscure material than do the others could be found in the fact that with these patterns we enter the field of tabooed social values. The symbolism involved in the remaining patterns could hence be more easily validated than could these four patterns. Nevertheless, it will be observed that substantial confirmation of validity has been attained even for these patterns as the + and P+ figures in Table 5 clearly show. Incidentally, the remaining symbols contributed to the "no evidence" column in proportion to the number of judgments based upon them in the entire study.

Consideration must be given to the "minus" column at this point. The only three symbols for which we find disproportionately higher percentages in this column than in the total column are the symbols for intimate heterosexuality (11.5%), "femaleness" (14.8%), and "maleness" (15.6%). In view of the fact that these three symbols have approximately the same percentages in the "plus" column as in the total column, it would seem that the author might have felt encouraged to extend her conclusions beyond the evidence available. The fact that these are respectively fourth, first, and second highest in number of interpretations derived from the completed patterns, however, tends to support the conclusion that, in spite of the figures in the "minus" column, these proved to be exceedingly productive and reliable patterns.

In considering the conflictual scoring of "plus-minus," it is worth noting that the concentric circles pattern (Fig. 3) and the intimate heterosexual symbol (Fig. 6) comprise each 22% of the items thus categorized. The conflictual rating may have been due in these cases to confusing statements, leading to uncertain interpretations, by independent workers; or it may be that it is particularly easy in these two cases to emphasize an aspect of behavior brought out by the drawings and inquiry, without attributing sufficient importance to coexisting factors. Similar explanations are probably appropriate with reference to the less markedly skewed figures for the aggression (Fig. 11) and the "maleness" (Fig. 4) symbols. The other figures in this column are not significant when compared to the base-percentages in the last column of Table 4. In most cases, there were no ratings in this category at all, showing that obtainable

culture
large
&
psychological

TABLE 5
INTERPRETATIVE STATEMENTS ON EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER, MALES

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "++"	Partial Corrobo- ration "P+"	Conflict- ing Evidence "±"	Contra- diction "--"	Partial Contra- diction "P--"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	12 10.0	80 80.0 4.0	10 10.0 3.0	4 4.0 2.0	6 6.0 2.4		112	100
Semi-circle & Single line	No. % SE	12 10.9	83 84.7 3.0	8 8.2 2.8	1 1.2 1.0	6 6.1 2.4		110	98
Straight line	No. % SE	13 9.7	87 71.9 4.0	14 11.6 9.0	5 4.1 1.8	14 11.6 9.0	1 8.0 0.9	134	121
Inverted "Vs"	No. % SE	20 18.0	72 79.1 4.0	11 12.1 3.0		7 7.7 2.8	1 1.1 1.0	111	91
Diffuse mass	No. % SE	26 16.2	80 89.0 3.0	5 5.6 2.0	1 1.1 1.0	4 4.5 2.0		116	90
Crosslines	No. % SE	21 16.9	97 94.2 2.0	1 0.9 9.7		5 4.9 2.0		124	103
Counter-opposed semi-circles	No. % SE	16 17.0	74 79.6 4.0	15 16.1 3.0		4 4.3 2.0		109	93
Semi-circle within larger semi-circle	No. % SE	8 8.0	82 90.1 3.0	3 3.3 1.7	1 1.1 1.0	4 4.4 2.0	1 1.1 1.0	99	91
Jagged line	No. % SE	13 12.2	87 93.5 2.4	3 3.3 1.7		6 6.5 2.4		106	93
Incomplete "U"	No. % SE	18 13.5	106 93.0 2.0	2 1.8 1.4	1 0.9 0.9	5 4.4 1.8		132	114
Lines and semi- circles	No. % SE	17 13.7	94 87.8 3.0	5 4.7 2.1		5 4.6 2.1	3 2.8 1.7	124	107

evidence tended to be clear on the points raised in the experimental interpretations, even though this evidence was sometimes not conclusive as in *P+* and *P-* ratings.

The data dealing with conflicting evidence and partial contradiction, involving as they do together 34 of the 2,265 interpretations, are negligibly small and do not require detailed analysis.

B. SEX FACTORS

Tables 5 and 6 summarize the results according to the percentage of interpretative statements for each symbol in each scoring group. Table 5 contains these results for males only. Table 6 contains the results for females only.

In Table 5, the only figure in the "plus" column that is below 79% is that for the "maleness" pattern (Fig. 4). Since this is one of the highest of the corresponding figures in Table 6, while that for the "femaleness" pattern (Fig. 1) is lower in the female group, it seems likely that the difficulty of separating the personality's identification with the parental role from his conception of that pattern causes some difficulty in analysis. The fact that many of these cases were analyzed without benefit of inquiry must be kept in mind, however, in interpreting this point. In spite of this, the "maleness" pattern (Fig. 4) in the "plus" column of Table 5 is represented by 71.9% with a sigma of $\pm 4\%$. In the "femaleness" pat-

tern (Fig. 1) row of Table 6, the datum in the "plus" column is 81% with a sigma of $\pm 4\%$. These, then, are highly reliable results. In general, there seems to be greater variability in the correctness of interpretations in the male group than in the female group, where the percentages are neither as high nor as low as the extremes of the male group. Why this should be so is not clear. However, the effectiveness of the data for both sexes is so apparent that this slight variation should not matter.

The fact that the percentages for the two sexes go down when relationships with the opposite sex as a group are con-

sidered has been discussed above. It is clear, in these tables, that evidence is less easy to find in these areas, although the relationships with those of the same sex-group are rather easily determined from biographical data. Thus, in both sexes, the percentage in the "plus" column go up for the same sex group, and those in the "no-evidence" and "P-plus" column rise when the opposite sex is considered as a group. Again, it is important to note that nowhere do the figures in the "plus" column become unsubstantial or insignificant.

The only two relatively large figures in the "minus" column in both tables

TABLE 6
INTERPRETATIVE STATEMENTS ON EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER, FEMALES

Symbol	Data	No Evidence "O"	Complete Corroboration "+"	Partial Corroboration "+P"	Conflicting Evidence "+±"	Partial Conflicting "P±"	Contradiction "-"	Partial Contradiction "P-"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	3 2.9	81 81.0 4.1	5 5.0 2.0			14 14.0 3.5		103	100
Semi-circle & single line	No. % SE	15 15.1	73 89.0 3.5	1 1.0 1.0	1 1.0 1.0		6 7.3 9.0	1 1.0 1.0	97	82
Straight line	No. % SE	12 11.2	85 89.5 3.0	2 2.1 1.4	1 1.0 1.0		5 5.2 2.0	2 2.1 1.4	107	95
Inverted Vs"	No. % SE	18 14.4	97 90.6 2.6	4 3.7 1.7			6 5.6 2.0		115	107
Diffuse mass	No. % SE	9 9.4	70 81.4 4.1	8 9.3 3.4			7 8.1 3.0	1 1.2 1.0	95	86
Crosslines	No. % SE	22 23.9	61 87.1 5.2	6 6.6 9.3	1 1.1 1.3		1 1.1 1.3	1 1.1 1.3	92	70
Counter-opposed semi-circles	No. % SE	17 11.0	70 85.4 3.7	5 5.8 2.6		1 1.1 1.1	6 6.9 8.7		99	82
Semi-circle within larger semi-circle	No. % SE	8 8.6	72 84.7 3.9	5 5.8 2.4	2 2.3 5.0		6 7.0 2.8		93	85
Jagged line	No. % SE	12 13.3	62 81.6 4.3	8 10.2 3.4	2 2.5 5.6		4 5.1 2.6		88	76
Incomplete "U"	No. % SE	13 13.0	74 84.1 3.7	7 8.0 2.8			6 6.8 8.4	1 1.1 1.0	101	88
Lines and semi-circles	No. % SE	16 17.7	64 86.5 4.2	5 6.5 2.8			5 6.5 2.8		90	74

TABLE 7
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER OF ADULT PSYCHIATRIC CASES

Symbol	Data	No Evidence "O"	Complete Corroboration "+"	Contradiction "p-"
Semi-circle	No. % SE	4 4.5	79 94.0 3.6	5 6.0 2.7
Semi-circle & single line	No. % SE	9 12.5	58 92.0 3.4	5 7.0 3.4
Straight line	No. % SE	6 7.1	70 89.0 3.6	8 1.0 3.6
Inverted "Vs"	No. % SE	6 9.3	64 94.0 2.9	4 6.0 2.9
Diffuse mass	No. % SE	8 11.4	55 89.0 3.9	7 11.0 3.9
Crosslines	No. % SE	8 10.2	67 95.0 2.6	3 4.3 2.6
Counter-opposed semi-circles	No. % SE	9 5.8	61 94.0 2.9	4 6.1 2.9
Semi-circle within larger semi-circle	No. % SE	4 6.7	50 91.0 3.8	5 9.0 3.8
Jagged line	No. % SE	7 10.9	58 96.6 2.5	2 3.3 2.5
Incomplete "U"	No. % SE	3 3.3	83 95.0 2.3	4 4.7 2.4
Lines and semi-circles	No. % SE	10 13.5	61 95.0 2.8	3 4.7 2.8

occur in connection with the symbol for the parent of the same sex (Fig. 1 or Fig. 4). This is interesting because it gives support to the previously noted trend in the discussion the "plus" column, namely, that the confusion of the actual parental figure with the role assumed by the individual who identifies with that parent tends to lower the accuracy of interpretation.

C. FACTOR OF EMOTIONAL STABILITY

Those who doubt the existence of generalized (generic) symbols have occasionally pointed out that the pioneer work with symbols of this sort was done by researchers interested in pathology. For this reason, we include here Tables 7, 8, 9, and 10. Table 7 refers to 60 adult psychiatric cases, while Table 8 refers to 50 cases of apparently normal adults.

TABLE 8
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER, NORMAL ADULTS

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "+"	Partial Corrobo- ration "P+"	Contra- diction "-"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	4 5.2	66 92.0 3.0		6 8.3 3.0	76	72
Semi-circle & single line	No. % SE	6 14.6	44 97.2 2.8		1 2.8 2.8	51	45
Straight line	No. % SE	5 8.8	48 92.3 3.4	2 3.8 2.4	2 3.8 2.4	57	52
Inverted "Vs"	No. % SE	13 25.0	36 92.3 4.2		3 7.7 4.2	52	39
Diffuse mass	No. % SE	9 17.0	43 97.7 2.0		1 2.3 2.0	53	44
Crosslines	No. % SE	8 18.3	44 100.0			52	44
Counter-opposed semi-circles	No. % SE	7 14.6	41 100.0			48	41
Semi-circle within larger semi-circle	No. % SE	3 5.4	53 100.0			56	53
Jagged line	No. % SE	1 2.1	46 96.0 2.8		2 4.0 2.8	49	48
Incomplete "U"	No. % SE	1 1.8	51 96.5 2.6		2 3.5 2.6	54	53
Lines and semi- circles	No. % SE	2 4.4	42 97.5 2.2		1 2.5 2.2	45	43

The only difference between these two tables is that the "no evidence" column in the case of the normals is higher in some categories, and so are the percentages of "pluses."

Tables 9 and 10 summarize the same data pertaining to children. Table 9, referring to children with behavior disorders, is not significantly different

from Table 10 (normal children). The discrepancies here are easily explained by the fact that normal group drawings were all analyzed without access to inquiry.

In other words, the degree of reliability was slightly higher in the normal group. This may be due to the fact that the attitudes of those in need of, or

TABLE 9
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER, BEHAVIOR PROBLEM CHILDREN

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "+"	Partial Corrobo- ration "+"	Conflict- ing Evidence "+"	Contra- diction "-"
Semi-circle	No. % SE		23 92.0 5.0	1 4.0 4.0		1 4.0 4.0
Semi-circle & single line	No. % SE	3 14.0	17 95.0 5.0			1 5.0 5.0
Straight line	No. % SE		20 80.0 4.5		2 8.0 0.5	3 12.0 3.5
Inverted "Vs"	No. % SE	1 4.0	22 91.0 6.0			2 9.0 6.0
Diffuse mass	No. % SE	3 13.0	20 95.0 5.0			1 5.0 5.0
Crosslines	No. % SE	4 16.0	21 100.0			
Counter-opposed semi-circles	No. % SE	3 16.0	16 100.0			
Semi-circle within larger semi-circle	No. % SE	1 5.0	21 100.0			
Jagged line	No. % SE	2 9.0	20 100.0			
Incomplete "U"	No. % SE	4 17.0	18 95.0 5.0			1 5.0 5.0
Lines and semi-circles	No. % SE	3 12.0	20 95.0 5.0			1 5.0 5.0

undergoing, therapy are in a greater state of flux than are the attitudes of those who are relatively stable. The reason for the larger number of "O" scorings in the normal group is probably that half of the cases were from the interview group in which evidence was hardest to establish on some points. For example, sexual anxiety (Fig. 10) was sometimes difficult

to interpret in terms of concrete behavior, and thus the necessary information (positive or negative) was comparatively difficult to elicit. Substantially, these four tables do establish the fact that the symbols are about equally appropriate for the emotionally disturbed and the more adequately functioning members of a given population.

TABLE 10
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER, NORMAL CHILDREN

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "+"	Partial Corroboration "+"	Conflict- ing Evidence "±"	Contradiction "-"
Semi-circle	No. % SE	3 19.4	38 88.4 4.7	(13.9% P+)	1 2.3 7.3	4 9.3 (2.3% P-) 4.3
Semi-circle & single line	No. % SE	8 19.4	29 85.4 9.0	(9.0% P+)	3 8.8 4.7	2 5.9 1.0
Straight line	No. % SE	8 16.6	36 90.0 4.5	(15.0% P+)		4 10.0 (2.5% P-) 4.5
Inverted "Vs"	No. % SE	12 34.2	21 90.5 1.0	(18.1% P+)		1 4.5 1.0
Diffuse mass	No. % SE	2 6.6	28 90.3 5.2	(10.0% P+)	1 3.2 0.3	2 6.5 (3.0% P-) 1.0
Crosslines	No. % SE	9 27.3	20 83.3 5.5	(16.6% P+)	1 4.2 4.0	3 12.5 6.7
Counter-opposed semi-circles	No. % SE	15 35.5	24 88.9 6.0	(15.5% P+)		3 11.1 6.0
Semi-circle within larger semi-circle	No. % SE	5 12.6	29 80.6 6.5	(10.0% P+)	2 5.5 3.7	5 13.9 (2.5% P-) 5.2
Jagged line	No. % SE	3 8.8	27 87.1 6.0	(22.0% P+)	1 3.2 3.0	3 9.7 5.2
Incomplete "U"	No. % SE	10 20.4	31 81.6 6.2	(15.0% P+)	1 2.6 2.4	6 15.9 5.9
Lines and semi- circles	No. % SE	8 21.6	28 96.6 3.3	(28.0% P+)		1 3.4 (3.0% P-) 3.3

D. FACTOR OF AGE

Table 11 contains the results computed in percentage for the group of 46 children, age range 6-16. Table 12 contains the results computed similarly for the adult group, age range 17-69. When these two tables are compared, the differences appear very slight. It will be observed that percentages in the children's

group have been influenced by the comparative difficulty of obtaining judgments without direct inquiry on most cases.

Table 13 summarizes the results for the 12 children in the Indian groups. The size of the sigmas indicates a relative decrease of validity. However, there is some interesting information to be gleaned from this table. In the first place, the

TABLE 11
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: TOTAL NUMBER, CHILDREN

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "++"	Partial Corrobo- ration "P+"	Conflict- ing Evidence "±"	Contra- diction "--"	Partial Contra- diction "P--"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	3 4.2	55 80.1 4.8	7 10.3 3.6	1 1.4 1.4	4 5.9 2.9	1 1.4 1.4	71	68
Semi-circle & single line	No. % SE	11 17.5	43 82.7 5.2	3 5.7 3.2	3 5.7 3.2	3 5.7 3.2		63	52
Straight line	No. % SE	8 10.9	50 77.0 5.2	6 9.2 3.6	2 3.1 2.2	6 9.2 3.6	1 1.5 1.5	73	65
Inverted "Vs"	No. % SE	13 22.0	39 84.7 5.3	4 8.7 4.2		3 6.5 3.7		59	46
Diffuse mass	No. % SE	5 8.8	45 79.0 5.6	3 5.3 3.1	1 1.7 2.0	2 3.5 2.6	1 1.7 2.0	57	52
Crosslines	No. % SE	13 22.0	27 77.1 7.1	4 11.4 5.3	1 2.9 3.0	3 8.6 4.6		48	35
Counter-opposed semi-circles	No. % SE	18 29.5	35 81.5 5.9	5 11.6 4.7		3 7.0 3.8		61	43
Semi-circle within larger semi-circle	No. % SE	6 9.4	47 81.0 5.0	4 6.9 0.6	2 3.4 0.6	4 6.9 0.6	1 1.7 0.5	64	58
Jagged line	No. % SE	5 8.9	40 78.5 5.6	7 13.7 4.7	1 1.9 0.6	3 5.9 3.4		56	51
Incomplete "U"	No. % SE	14 19.7	43 75.5 5.1	6 10.6 3.7	1 1.7 2.9	7 12.3 3.3		71	57
Lines and semi- circles	No. % SE	11 10.0	89 90.5 9.4	8 8.1 4.3		1 1.0 0.3	1 1.0 0.3	110	99

children involved were five years younger at the time the validating material had been collected than they were at the time the test material was administered. This represents a difference between the ages of eight and thirteen. The greatest lowering of percentages in the "plus" column occurred with reference to the following symbols:

- (1) Individual heterosexual situation
- (2) Peer groups
- (3) Regression and mother tie
- (4) Self-concept
- (5) Competitive heterosexual situations

It seems evident that these are the areas in which one would logically expect

much change over this period of five years.

The reason for the relatively high predictive value (85% "plus") of the sexual anxiety symbol may be the fact that the manner of handling, rather than a specific source of anxiety, was emphasized in the analyses. This might not change very much with age. Of course, the other data do not shed light on this problem, since all that can be told from them is that the symbol is predictive at the various age levels also for members of our own cultural group.

Although the sigmas are relatively large (due to the relatively small number of cases), in comparison with the data from the rest of this study (in which one

TABLE 12
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: ALL ADULTS

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "+"	Partial Evidence (Corrobo- ratory) "P+"	Contra- diction "-"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	8 12.5	145 93.0 2.0		11 7.0 2.0	164	156
Semi-circle & single line	No. % SE	15 12.2	102 87.0 3.0		6 13.0	123	118
Straight line	No. % SE	11 7.9	118 90.1 2.2	2 1.5 1.4	10 7.7 2.0	141	130
Inverted "Vs"	No. % SE	19 15.0	100 93.3 2.0		7 6.7	126	107
Diffuse mass	No. % SE	17 13.8	98 92.5 2.1		8 7.5	123	106
Crosslines	No. % SE	16 12.4	111 97.4 1.5		3 2.6	130	114
Counter-opposed semi-circles	No. % SE	16 12.9	102 95.3 1.7		6 4.7	124	108
Semi-circle within larger semi-circle	No. % SE	7 6.1	103 96.2 1.7		5 3.8	115	108
Jagged line	No. % SE	8 6.9	104 96.3 1.7		4 3.7	116	108
Incomplete "U"	No. % SE	4 2.8	134 96.7 1.6		6 3.3	144	140
Lines and semi-circles	No. % SE	12 10.1	103 96.4 1.6		4 3.6	119	107

becomes accustomed to sigmas of one-thirtieth of the proportion), those for the stable areas are of good value in the Indian Group. They are about one-eighth of the proportion, and thus indicate a better-than-chance distribution.

Results on the twelve Indian children are probably inconclusive. On the other hand, since they indicate high reliability,

they may be regarded as contributory evidence, from the viewpoint of the test as a whole. On the other hand, when these results are coupled with the findings of anthropological studies such as Roheim's and Hallowell's, they may not necessarily prove the universality of the symbols selected, but the likelihood of their doing so is greatly enhanced.

E. STIMULUS SEQUENCE AS A FACTOR

Approximately one-third of the subjects were given the symbols in random order. These results are summarized in Table 14. Comparing them with the results in Table 3, the "plus" percentages seem to be slightly higher. The explanation for this might easily lie in the elimination of thirty cases in which no in-

quiry had been conducted. The order was the same for everyone in this particular group (normal children). In any case, the results are not impressively higher in Table 11. The conclusion one can draw is that, even if the only reason for less than 100% plus-ratings for all symbols were a question of contamination of attitudes, the 15% or less devia-

TABLE 13
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: INDIAN GROUP

Symbol	Data	No Evidence "O"	Complete Corroboration "+"	Conflicting Evidence "±"	Contradiction "−"
Semi-circle	No. % SE	2 15.4	9 81.8 (54.5% P+) 11.3		2 18.1 11.3
Semi-circle & single line	No. % SE	0 0	8 66.6 (8.3% P+) 13.5		4 33.3 13.5
Straight line	No. % SE	4 21.1	12 80.0 10.0		3 20.0 (13.3% P−) 10.0
Inverted "Vs"	No. % SE	6 30.0	11 85.7 (21.4% P+) 10.0		2 14.2 (7.1% P−) 10.0
Diffuse mass	No. % SE	3 21.4	10 90.9 (45.5% P+) 8.4		1 9.0 8.4
Crosslines	No. % SE	7 48.9	7 70.0 (45.5% P+) 15.0		3 30.0 (27.3% P−) 15.0
Counter-opposed semi-circles	No. % SE	5 37.5	5 62.5 (40.0% P+) 14.8	1 12.5 (20.0% P) 10.0	2 25.0
Semi-circle within larger semi-circle	No. % SE	3 21.4	7 63.6 (27.3% P+) 14.5	1 9.0 8.5	3 27.2 13.5
Jagged line	No. % SE	2 20.0	8 88.8 (37.5% P+) 10.5		1 11.1 (12.5% P−) 10.5
Incomplete "U"	No. % SE	5 27.8	9 64.2 (23.1% P+) 12.7	3 21.4 (15.5% P) 11.0	2 14.2 (7.7% P−) 9.0
Lines and semi-circles	No. % SE	2 10.5	11 64.7 (11.8% P+) 11.6		6 35.3 (11.8% P−) 11.6

TABLE 14
INTERPRETATIVE STATEMENTS FOR EACH SYMBOL FALLING INTO THE VARIOUS
SCORING GROUPS: RANDOM ORDER GROUP

Symbol	Data	No Evidence "O"	Complete Corrobo- ration "++"	Partial Corrobo- ration "P"	Conflict- ing Evidence "--"	Contra- diction "--"	Total Number	Total Number Without "O"
Semi-circle	No. % SE	3 4.1	62 88.6 3.8	1 1.4 1.2		7 10.0 3.6	73	70
Semi-circle & single line	No. % SE	5 8.9	49 94.3 3.2			3 5.7 3.2	57	52
Straight line	No. % SE	5 8.9	52 91.2 3.8		1 1.8 3.4	4 7.7 3.4	62	57
Inverted "Vs"	No. % SE	8 12.9	50 92.5 3.6	1 1.9 1.5		3 5.8 3.2	62	54
Diffuse Mass	No. % SE	4 7.7	48 90.8 3.9	1 1.5 1.6		4 7.5 3.4	57	53
Crosslines	No. % SE	8 1.3	51 98.1 1.9			1 1.9 1.9	60	52
Counter-opposed semi-circles	No. % SE	7 11.8	49 94.2 3.2	1 1.9 1.9		1 3.9 6.7	59	52
Semi-circle within larger semi-circle	No. % SE	4 7.5	46 93.8 3.3			3 6.2 3.3	53	49
Jagged line	No. % SE	2 3.8	47 94.0 3.3			3 6.0 3.3	52	50
Incomplete "U"	No. % SE	1 1.5	63 100				64	63
Lines and semi- circles	No. % SE	3 5.0	52 92.8 3.4			4 7.2 3.4	59	56

tion from 100% may be attributed to the significance of the order in which the stimulus-patterns were presented. However, there is good reason to believe, as has already been demonstrated, that such factors as lack of sufficient inquiry and lack of inclusiveness of validating data affecting Table 3, all have a negative effect on the "plus" percentages. Thus one is left with the impression that the symbols included in this investigation are

sufficiently unique in individual meaning, and effective as individual stimuli, to reduce the sequence of their presentation to a position of relative unimportance. We can thus conclude that the order of presentation of stimuli—no less than the factors of sex, emotional stability, age, and cultural background—has no appreciable effect on the results obtained by our technique.

CHAPTER V

CONCLUSIONS

A. GENERAL IMPLICATIONS OF THIS STUDY

THE hypothesis tested in this study was that certain abstract visual forms may be regarded as universal symbols. Eleven forms were selected for use as stimulus-patterns. The reactions of the subjects to these patterns, expressed on both a non-verbal and a verbal level, were analyzed in terms of the hypothetical meanings of the stimulus-patterns. Validation of the meanings of the stimulus-patterns depended upon whether these interpretations about the subjects could be established as true.

The results described in detail in the preceding chapter show that the eleven stimulus-patterns all disclosed high predictability as cues to emotional dynamics. We may thus conclude that these stimulus-patterns could be reliably interpreted on the assumption that they contain inherently those subtle symbolic meanings which we attributed to them in our basic, pre-experimental rationale.

The results are similar for both emotionally stable and emotionally unstable members of our culture, regardless of sex or age. They are less conclusive, because of the small sample used, for members of Indian cultures. In the Indian groups, too, however, the evidence supports the hypothesis under question. Further work with members of other cultures is therefore warranted.

B. USE OF THE SYMBOLS AS BASIS FOR PROJECTIVE TECHNIQUE

In discussing the use to which the symbols may be put in a projective test, it is necessary first to consider the mean-

ing of projection in this sense. As understood by this writer, projection refers to the qualities which a situation assumes as a result of the dynamics which the subject brings to bear on it. The more plastic a situation is, the more unstructured it is, the more of his own qualities may we expect a subject to reveal in coping with the situation. However, a subject's "projections" may be observed in all life situations. In using a *projective technique*, we standardize a set of conditions which can be presented to each new subject, so that his reactions in this laboratory situation may be compared to the reactions of others. Even in so thoroughly structured a situation as one in which a soldier is required to give a salute, we may see this. Some men respond snappily and with pride in the act. Others respond so quickly that the salute is barely meaningful. Still others are slow and deliberate. In each case the individual shows his own style of reaction and, thus, certain aspects of his personality.

The Rorschach test is possibly the least structured and the most plastic of the various projective techniques in common use. However, the *manner of the subject's response has been more thoroughly standardized than the meanings of the situations to which he responds*. Other tests, such as the TAT, present somewhat more structured situations to the subject. However, the *clearer definition of the stimulus-material* tends to limit the extent of individual projection. The Symbol Elaboration Test, as we might call the application of the stimulus-patterns described herein, offers an advantage in that the situation presented to the subject is dis-

tinctly structuralized for the informed observer (clinical psychologist) while, for the subject, there is a minimum of conventional meaning to guide his responses. A further point in its favor is the fact that this test does not depend upon the subject's selection of certain elements of the field for his interpretation. In most techniques, it is sometimes a question of whether or not avoidance of a part of the stimulus is responsible for emphasis upon another part. Each of the symbols here presents a stimulus situation on an all-or-none basis. Thus, it is always clear to what situation specifically the subject reacts. Finally, the non-verbal character of the completion required in this test, prevents blockage in many subjects who might be inhibited on a verbal test having similar objectives, but who give no evidence of inhibition here.

Also important is the relative ease of interpretation made possible by the tester's previous knowledge of the implications of the symbols in this test. It is true that experience in free-drawing analysis is very helpful in interpreting the symbol-completions offered by the subject. However, even experience in handling symbolic material is not essential to the profitable use of the test proposed, so long as the symbols are accepted as carrying certain non-conscious implications. The inquiry-questions provide guidance in the interpretation of the drawings, such that the affectual tone of the subject toward a given symbol can be revealed. In every case there is some clue as to the subject's feeling toward the area of experience symbolized. Almost never does

a subject totally refuse to draw upon a sheet; and, when he does, it may be discovered, or even assumed, that his conflict is with regard to the particular area symbolized on the sheet. The influence of the order of presentation of the symbols on the reactions of subjects has been proved elsewhere to be negligible.

The foregoing is not meant to imply that this test is expected to supplant the projective techniques already in use. Rather, it is felt that to propose the employment of a new test is to accept responsibility for justifying its addition to a standard battery. Anyone familiar with the various projective techniques now utilized in studying personality knows that each of them has a value of its own.

One important limitation to the use of this new test lies in the fact that only one main response can be given to each symbol in a single administration. The Rorschach test, the TAT, and others provide an opportunity for as many responses to a single stimulus as the subject wishes to make. Also, the fact that the symbols are centered on the page limits to an extent the applicability of the free-drawing type of analysis to this material. Another limitation lies in the effect of a strong dislike for drawing on the nature of the task. In such cases, the analysis depends solely on answers to the inquiry questions expressing the subjects' general attitude toward the stimulus material. Such an analysis is found to be schematic. Nonetheless, it is hoped that there will be further use for the symbols in clinical as well as research work.

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